

JOHN GILBERT'S MISSING MONTHS

IAN A.W. MCALLAN

McAllan, I.A.W. 1994 06 01: John Gilbert's missing months. *Memoirs of the Queensland Museum* 35 (1): 155-179. Brisbane. ISSN 0079-8835.

The activities of John Gilbert, the natural history collector, are examined for the months January - September 1844. Major sources used are his letters, unpublished notebooks and diaries. During this period he spent over a month in Sydney, some of the time writing up his notes. He then travelled overland via the Hunter, Namoi, Gwydir and Dumaresq River valleys to the Darling Downs, collecting specimens both en route and at the Downs. Also examined are the details of several type specimens of mammals, birds and fish collected during this period. □ *John Gilbert, John Gould, Frederick Strange, nineteenth century, natural history collectors, type specimens, Darling Downs, Namoi River, Gwydir River.*

Ian A.W. McAllan, 46 Yeramba St, Turrumurra, New South Wales 2074, Australia; 29 July 1993.

The life of John Gilbert (1812-1845), the natural history collector, is of more than passing interest to modern Australian biologists. He first travelled to Australia in 1838 under the employ of the noted ornithologist John Gould (Sauer, 1982). Gilbert had formerly worked with Gould at the Museum of the Zoological Society of London from 1828 to 1836 (Torrens, 1987). By 1838, Gould was no longer working for the Zoological Society and was compiling information for his folio monograph, 'The Birds of Australia' (Sauer, 1982). He began publishing a folio work on Australian birds the previous year but soon recognised he needed more information to make it complete (Sauer, 1982; McEvey, 1979). Gould, perhaps realising that he was not in a position to visit and collect specimens in all the accessible parts of the continent himself (Chisholm, 1941), employed John Gilbert some time before April 1838 (Torrens, 1987).

Gould and Gilbert separated in early February 1839, just over a month after reaching Tasmania. Gould collected specimens in the eastern colonies while Gilbert travelled on to Perth in Western Australia and eventually to Port Essington, now in the Northern Territory. As these areas were never visited by Gould himself, Gilbert's observations were often quoted in Gould's works, while many of the specimens Gilbert collected were designated type material by both Gould and later authors (e.g. Stone & Mathews, 1913; Thomas, 1921; de Schauensee, 1957; Warren, 1966; Warren & Harrison, 1971). Indeed Gilbert was the first to collect as many as eight percent of the higher vertebrates of Australia (Fisher, 1992).

Gilbert returned to England in September 1841

and less than five months later was again sailing for Australia. On his second visit to Australia, he spent eighteen months in Western Australia before coming to the eastern States in early 1844 (Whittell, 1942b). Later in the year, while visiting the Darling Downs, he joined Ludwig Leichhardt's private expedition to Port Essington. On the evening of 28 June 1845, the Expedition was camped near the base of Cape York Peninsula (Leichhardt, 1847). They were attacked by a group of Aborigines, possibly because they were intruding on an Aboriginal ceremonial ground then in use (Roderick, 1988). Gilbert was speared as he was leaving his tent and died almost immediately.

Given the interest in Gilbert's activities and collections, it is surprising that there is a period of his second visit to Australia, from 30 January to 18 September 1844, that has been both misinterpreted and largely ignored by his biographers.

The first to discuss this period was A.H. Chisholm, who in 1940 noted that from February to August 1844, Gilbert 'worked north through New South Wales up to the Darling Downs of the present Queensland'. The following year he modified this to 'worked north overland' (Chisholm, 1941). Later, Whittell (1954a) did not know whether Gilbert travelled to the Darling Downs by sea or land, while Sauer (1982) modified Chisholm's version slightly to say that Gilbert collected, but omitted to state that he had travelled overland. Webster (1980) suggested that Gilbert travelled by coach and dray from Newcastle to the Darling Downs via Cassilis when 'horses had not been kept for him at an inn'. Finally Albrecht & Albrecht (1992) noted that he

spent a short time with Stephen Coxen in the Hunter region collecting specimens and then travelled north to the Darling Downs.

Chisholm (1941) and Webster (1980) attempted to use Gilbert's diaries of the Port Essington Expedition to trace his movements for this period. Chisholm recovered these two volumes from Gould's descendants in 1938 and lodged them in the Mitchell Library, State Library of New South Wales (hereafter ML). Gilbert's account of the Port Essington Expedition was largely written in ink and take up most of the contents of the volumes. His notes for the earlier period in the eastern states takes up part of the first volume, but are in pencil and are now difficult to read. Close examination of the contents of these diaries reveals a number of errors made by both Chisholm and Webster. These errors have been compounded by those who have used these publications as secondary sources. Therefore this paper is an attempt to clarify some of Gilbert's movements during the period concerned, and to give some details of the animals he encountered.

GILBERT'S SECOND VISIT TO AUSTRALIA PRIOR TO MARCH 1844.

Gilbert arrived back in London from his first trip to Australia in mid-September 1841, (letter from Gilbert to Gould 17 September 1841 in ML), but Gould was obviously anxious for more material as Gilbert left London for Australia on 2 February 1842. He arrived in Western Australia on 17 July 1842 and remained collecting specimens until 20 December 1843, when he left for Sydney via Launceston. He arrived in Sydney on 30 January 1844 on the 155 ton brig 'Union' (Anon, 1844a; Chisholm, 1940; Whittell, 1941, 1942a,b, 1951).

Little is known of Gilbert's movements during his extended stay in Sydney. At some stage between 13 January and 27 March he met the naturalist John MacGillivray (Whittell, 1945). It was stated by Loch (1989) that Gould, Gilbert, and MacGillivray had all stayed in Sydney at the boarding house kept by the wife of another naturalist, Frederick Strange. Loch obtained this information from an undated note written by the late Tom Iredale in the Australian Museum (L. Loch, pers. comm.). Iredale had been informed of this by the conchologist John Brazier who was related to a later associate of Strange, J.C. Rositer (Whittell, 1947). However Brazier's story is not entirely correct for Gould stayed at George

Bennett's house on his first two visits to Sydney (Hindwood, 1938; Sauer, 1982). It is also doubtful whether Strange had even visited the city before Gould left in early April 1840, though he was certainly in Sydney later in the year (Whittell, 1947; Sauer, 1982).

Strange's wife took in boarders, as shown by the theft of a jacket and a pocket-book containing some money from 'a young man named Laurence Carearnan, residing at Mr. Strange's, Princes-street' in January 1845. (Anon, 1845). Princes Street no longer exists, having made way for the southern approaches to the Sydney Harbour Bridge.

Gilbert did meet Strange and his wife while in Sydney and stayed at least part of his time at Strange's house. On 22 February 1844 Strange wrote to Gould: 'Mr Gilbert is now stopping with me in Sydney' (Fisher, 1992; letter in British Museum (Natural History) [hereafter BMNH] General Library, London). MacGillivray was apparently also present at the time, for on 4 June 1844 Strange wrote to Gould: 'H.M. ship Fly have now been away about three months and Mr MacGillivray is gone in her he used to stope with me when he was in Sydney and Mr Gilbert have been gone about the same time Beyond New England and I have not heard of him since he left' (Fisher, 1992; letter in BMNH). MacGillivray himself later recorded that he, 'saw much of him [Gilbert] a few months before his departure on his last and fatal journey' (MacGillivray, 1846). Gilbert was evidently on friendly terms with Strange and his wife. Gilbert wrote to Strange from the Darling Downs on 16 September 1844, and amongst other matters left his 'Best respects to Mrs. S.' (Whittell, 1947).

Gilbert wrote at least one letter to Gould during March (his letter No. 16; Chisholm, 1940). He was still in Sydney on 4 March 1844, for on this date J.B. Jukes wrote from Sydney to his aunt, 'I go with him [George Bennett] and Gilbert (Gould's agent and collector) to look at some gigantic bones from New Zealand this evening', (Jukes, 1871).

Gould and Bennett were close colleagues. Gould had stayed at Bennett's house in April and September 1839 (Hindwood, 1938; Sauer, 1982) while Bennett later became Gould's agent in Sydney (letter from Gould to Bennett dated 18 December 1844 in ML). Gilbert also received 'assistance and advice' from Bennett in May 1840, on his earlier visit to Sydney (letter from Gilbert to Gould dated 4 May 1840 in ML). He wrote to Bennett on 10 September 1844 giving

details of Ludwig Leichhardt's forthcoming expedition to Port Essington (letter in Leichhardt papers ML; Whitley, 1938). In this letter he asked Bennett to forward his mail from Sydney to Port Essington. This suggests that Bennett's house had been used as a forwarding address by Gilbert. In the same letter is the information that Strange told him that Gould had not written, so either Strange had spoken to Bennett or Strange's house was also a forwarding address.

Before Gilbert departed for Australia, Gould gave him instructions to collect specimens at the Illawarra, the lower Hunter and near "Yarrundi" in the Upper Hunter, the property of Stephen Coxen, Gould's brother-in-law (Longman, 1922). Accordingly, Chafer (1992, pers. comm.) inferred that Gilbert visited the Illawarra at some stage, but there is no proof of this. The only indication that Gilbert may have done any fieldwork is a postscript in Strange's letter to Gould of 22 February 1844 that: '*I and Mr Gilbert are going to Brooken Bay [=Broken Bay] after some Wallaroo [=Common Wallaroo, *Macropus robustus*]*' (Fisher, 1992; letter in BMNH). Whether Gilbert and Strange actually went to Broken Bay is not known, as there is no written account of such a visit, nor can any specimens from this fieldwork be identified (C.T. Fisher, pers. comm.).

Examination of Gilbert's notebooks held by the Queensland Museum and the pencilled notes in his diary, suggests that Gilbert was probably occupied for most of his stay in Sydney, appending information into his notebooks from recently published works on Australian animals. These notebooks were used by Gilbert as a field guide to the species he was likely to encounter. They were discussed by Whittell (1951, 1954b) who also concluded that they were used to record information on the species already observed by Gilbert.

In 1839 on his first visit to Western Australia Gilbert had a copy of Gould's 'Synopsis of the Birds of Australia' (Whittell, 1941). This apparently was insufficient for Gilbert's fieldwork, for on 4 May 1840 he wrote to Gould from Sydney: '*You have left me a very long list of desiderata, but here again your haste has caused you to commit an oversight, in leaving me so long a list of scientific names without anything in the least explanatory, you must be aware that a very great number of these Birds I have never seen & unfortunately for the want of Knowledge of Latin I must remain in utter ignorance of a great many of them, but such of them as are to be seen in the*

Museum: I will endeavour to make myself acquainted with' (letter in ML). Shortly after Gilbert visited the Australian Museum, which at the time had Bennett as Secretary and Curator (Strahan, 1979; Whittell, 1942a; letter from Gilbert to Gould dated 15 May 1840 in ML).

On Gilbert's second visit to Australia he needed a better guide for use in the field, and the notebooks now held by the Queensland Museum appear to have been compiled by Gilbert for this purpose. His notebook on birds runs to 681 pages. In addition at the beginning there is an 18 page index to the names in the book and a table of distribution. This index, in conjunction with the details of the plates included in the notebook proper, gives some idea of when it was written.

The size of the pages of these notebooks is 185 x 275mm, which is the size of the plates in Gould's 'Synopsis of the Birds of Australia'. The index is smaller at 180 x 260mm. The larger pages were trimmed at least once during binding as the page numbers handwritten in the top corners were cut off in the binding process. The plates interleaved with the text in the notebook are largely derived from Gould's 'Synopsis', and Whittell (1951) was incorrect when he said that most of the remainder are from Gould's 'Birds of Australia and the Adjacent Islands'. Eleven plates come from this work, those of the Spine-tailed Swift *Hirundapus caudacutus* [plate letterpress as *Chaetura macroptera*], Rufous Whistler *Pachycephala rufiventris* [as *Pachycephala pectoralis*], Elegant Pitta *Pitta elegans vigorsii* [as *Pitta vigorsii*], Variegated Fairywren *Malurus assimilis lamberti* [as *Malurus lamberti*], Red-winged Fairywren *Malurus elegans*, Zebra Finch *Taeniopygia guttata* [as *Amadina castanotis*], Star Finch *Neochmia ruficauda* [as *Amadina ruficauda*], Spotted Bowerbird *Chlamydera maculata* [as *Calodera maculata*], Blue Bonnet *Psephotus haematogaster* [as *Platycercus haematogaster*], Budgerygah *Melopsittacus undulatus* [as *Nanodes undulatus*] and Black Honeyeater *Certhyonix niger* [as *Myzomela nigra*]. The bulk of the remainder actually come from Gould's 'Birds of Australia', although they were cut from their folio size to that of the Synopsis plates. As a consequence, some birds pictured on the folio plates have been removed. For example, in Gilbert's notebook the plate of the Rainbow Bee-eater *Merops ornatus* has only one bird pictured, that of the lower bird in the folio plate.

These plates serve as a useful illustration of Gould's procedure in publishing his monographs

since Gilbert was probably given copies of all available plates of Australian bird taxa during the few months he was in London. Of these plates, there are:

a) seven coloured and six uncoloured plates from Parts I-V which were published before Gilbert left London [note the plates of the Rufous Whistler, Elegant Pitta and Black Honeyeater are not counted here as they are identical in Gould's 'Birds of Australia and the Adjacent Islands' and his 'Birds of Australia', evidence of Gould re-using his lithographic stones (McEvey, 1979). For the publication dates of Gould's folio works see Waterhouse (1885), Sauer (1982) and Sauer & Evans (1989)];

b) 12 uncoloured plates and one partly coloured plate which were scheduled to be published in Part VI on 1 March 1842, one month after Gilbert left for Australia. The partly coloured plate is the Scrubfowl from Port Essington, *Megapodius tumulus*, which has only the bird painted;

c) three uncoloured plates and one partly coloured plate (the Rose-crowned Fruit-dove from Port Essington, *Ptilinopus ewingii*) which were scheduled to be published on 1 June 1842 in Part VII; and

d) an uncoloured plate of *Estrelda bella*, [*Stagonopleura bella*, Beautiful Firetail] from Part XVIII which was scheduled to be published as late as 1 March 1845. The plate itself lacks the letterpress and has the scientific name inscribed in Gilbert's hand.

Gould had most of the plates at hand for the next Part to be published (most Parts had 17 plates), as well as some that were to be published many months and even years later. The Rose-crowned Fruit-dove was formally described after Gilbert left for Australia. The partly coloured plate of this bird is signed in paint 'HCR', that is Henry Constantine Richter, who was the principal artist first employed by Gould in 1841 after the death of Gould's wife. Indeed, the first plates drawn by Richter were those in Part VI (letter from E.C. Prince, Gould's secretary, to Rev. Ewing, 30 December 1842 in ML; Sauer, 1982). In the index '*Ptilinopus ewingii*' is written in thicker pen, suggesting that Gilbert added the name later, having overlooked the letterpress when originally creating the index. Most of the layout of the notebooks and insertion of the plates, was probably done by Gilbert in London between September 1841 and February 1842. An indication that this was the case is the description of *Meliphaga longirostris*, the Western Australian subspecies of New Holland Honeyeater

Phylidonyris novaehollandiae longirostris, which was included in the notebook and mentioned in Gilbert's list of specimens sent back to England from Western Australia in early 1844 (Whittell, 1942b). This subspecies was not described until November 1846 (Gould, 1846b), and the fact that Gilbert had listed it, but did not include a plate, suggests that Gould had personally told Gilbert his intention of naming the bird when Gilbert was in London.

The index itself was written at different times, though it is entirely in Gilbert's hand. Most of the contents were written with a fine pen, though some parts, notably corrections and additions, were written with a thicker pen. The fine writing in the index and table of distribution must have been written after mid-March 1843 as the locality 'Abrolhos [=Houtman's Abrolhos]' is included in fine ink. Gilbert visited these islands off Western Australia between 6 January and 20 March 1843 (Whittell, 1942a,b). The changes in thicker pen in the index are not great in number. They are often alterations to the genera or new names given to descriptions originally referred to only by genus. Each of the changes can be traced to the Gould publications appearing after Gilbert's departure for his second visit to Australia. Most of these changes are found in the various Parts of Gould's 'Birds of Australia', however five are found in three papers in the 'Proceedings of the Zoological Society of London' (Gould, 1842f, i, 1843a). The last of the changes are those that occurred in Part XI of Gould's 'Birds of Australia'. This was scheduled to be published in London on 1 June 1843 thus the index must have been corrected some months after this date.

When discussing the notebooks, Whittell (1951) only gave information concerning those species recorded from Western Australia. Gilbert's notes from the second trip are almost entirely confined to observations from this State. In all cases references to observations are made in the past tense. There are some notes on the birds from the Port Essington area, but these refer to his previous visit to Australia. For those species restricted to the east coast there are no additional notes beyond the descriptions of the animals. So it appears that Gilbert wrote these notebooks prior to collecting on the east coast.

New names and descriptions, as well as Gilbert's observations on the species recorded in Western Australia (including mammals, cf. mammal notebook; Whittell, 1954b), were added later. Whether he wrote any of this in Western Australia

is unclear. Apart from the Governor, John Hutt, there were no subscribers to any of Gould's works in Western Australia at the time, nor had Gilbert been able to interest any additional subscribers (see letter from Gilbert to Gould dated '15 December 1842 [=1843]' in ML; reprinted in Whittell, 1942b). Gilbert was unlikely to have had access to the new parts of Gould's folio editions in Western Australia, let alone the 'Proceedings of the Zoological Society of London'. The changes to the index were probably written in Sydney from Bennett's copies of the relevant parts of the publications concerned. Bennett was a subscriber to all of Gould's folio works (Sauer, 1980) and he also had an extensive library of scientific literature, Bennett's bookplate being found in many volumes in libraries around Sydney (pers. obs.). Given the quantity of material that Gilbert wrote, he may have spent a large part of his time in Sydney transcribing notes from George Bennett's copies of Gould's publications. This would have left him little time to collect specimens.

As noted by Whittell (1951, 1954b), there is another index in the Queensland Museum Library to a notebook on kangaroos, similar to the bird index, also written in Gilbert's hand. The whereabouts of the kangaroo notebook is not known, but it was probably a similar layout to the bird notebook. Part I of Gould's 'Monograph of the Macropodidae' was scheduled to be published in August 1841, though it may have been delayed until late September (Sauer, 1982), while Part II appeared in early May 1842. As Gilbert was given copies of bird plates scheduled to be published in June 1842, it can be assumed the kangaroo notebook compiled by Gilbert included most of the plates from the macropodid monograph. This may mean that the kangaroo notebook was the size of the original folio plates and may have been cut for its lithographs at a later stage.

GILBERT'S PENCILLED NOTES IN HIS DIARIES OF THE PORT ESSINGTON EXPEDITION.

Gilbert's diary of Leichhardt's Port Essington Expedition was written in two volumes. In the first there are a number of pages written in pencil with the bulk of the diaries written in ink. Chisholm (1941) referred to the pencil section as merely 'pencilled notes of various kinds'. These pencilled notes are extremely difficult to read and a large proportion of them are illegible. When the

diaries came to the Mitchell Library in 1938 a typescript copy was made. However the transcriber obviously had difficulty reading the pencilled section and this was never typed.

In deciphering the Gilbert diary I have used both microfilm and photocopies of the relevant volume. This particular volume has been missing since at least 1985. By using microfilm on the reader under varying intensities of light and degrees of magnification, it has been possible to read a fair proportion of the pencilled notes. When quoting from a passage I have followed the convention of citing an illegible word as: [blank]. Words that are inferred, or probable, are inserted in square parentheses and followed by a question mark. All punctuation and spelling is as close as possible to Gilbert's original.

Chisholm also had difficulty reading the pencilled notes in the diaries. He mentioned in a footnote to his 1944 paper: 'For my own part, I read much of the diary in the original in England, but have worked upon it subsequently from a typed version copy supplied by the authorities of the Mitchell Library, Sydney, to whom the document was presented'.

In the same paper Chisholm discussed Gilbert's notes on a Flock Bronzewing *Phaps histrionica* collected on Leichhardt's Port Essington Expedition. Chisholm referred to it as: 'a beautiful species certainly, but one that he [Gilbert] had seen previously on the Namoi Plains'. Gilbert's diary for the day in question (23 April 1845) notes in ink: 'it is a beautiful species certainly, and I have seen it before on the Namoi plains'. Chisholm's almost verbatim quote of Gilbert's diary inadvertently shows that Chisholm did not read the relevant section in the pencilled notes. Chisholm went on to discuss Gould's records of the species from the Namoi in 1839-40 and gave no further details of Gilbert's sightings from the same area. Gilbert recorded Flock Bronzewings a number of times in his pencilled notes (see below) and this deserved more than a passing mention.

The first part of the pencilled notes consists of a series of descriptions of mammals, birds and fish, largely from the east coast and Port Essington areas, which originally ran to 59 pages of text. These mammals and birds are all identified by scientific name, and some of them had been described by Gould from material sent to London by Gilbert on his first trip to Australia. The accounts that can be read are of species described in Parts VI to IX of Gould's 'Birds of Australia' and Part II of his 'Monograph of the

Macropodidae', as well as mammals and birds described in Gould's papers given at the meetings of the Zoological Society of London during the first ten months of 1842 (Gould, 1842c,d,f,g,h,i, 1843a) and Gould's paper describing *Macropus ocydromus* [*M. fuliginosus*, Western Grey Kangaroo] and *Lagorchestes albipilis* [*L. fasciatus*, Banded Hare-wallaby] in the 'Annals and Magazine of Natural History' (Gould, 1842e). Gilbert also listed *Perameles harveyi* [*Bettongia lesueur*, Burrowing Bettong] and *Phascogale albipes* [*Sminthopsis murina*, Common Dunnart] described by G.R. Waterhouse at the meeting of the Zoological Society of London on 8 March 1842 (Waterhouse, 1842), and *Phascogale leucopus* [*Sminthopsis leucopus*, White-footed Dunnart] and *P[hascogale] apicalis* [*Parantechinus apicalis*, Dibbler] described by J.E. Gray in the 'Annals and Magazine of Natural History' during 1842 (Gray, 1842a,b). In most cases the species are listed exactly in the order the species were published in these works (comparisons made with unbound ML sets of the folio works).

Amongst the notes there is also a page and a half of brief list of fish names, both scientific and Aboriginal. These names are numbered and correspond with numbered specimens collected by Gilbert at Port Essington and Timor in 1840 and 1841. These fish were described in a series of papers published by John Richardson in 1842 (Richardson, 1842a,b,c). Richardson published five further papers in the 'Annals and Magazine of Natural History' based on the fish collected by Gilbert from Port Essington. Later in the list of descriptions Gilbert wrote the first name from the next of Richardson's papers, *Gerres filamentosus*, (Richardson, 1842d), but crossed it out. The fact that Gilbert does not list the later fish names suggests that he decided that there was little value in listing them without descriptions. The order of Gilbert's notes imply that he was systematically extracting the descriptions of Australian species of mammals, birds and fish from the available scientific literature and Parts of Gould's folio works that were published after he left for Australia.

Given the volume of material extracted from journals, it appears that these notes were also written while he was in Sydney. Another indication that this was the case is that there is the note: 'Andrew Carr[,] Cumberland Street' amongst the descriptions. There is no Cumberland Street in Perth. Cumberland Street, Sydney, still exists and in 1844 was the street parallel to Princes Street. Although I have been unable to

find any mention of an Andrew Carr of Cumberland Street from this period, there is a Richard Carr listed in the electoral roll for this address in 1844 (Anon, 1844i). Given the constraints for voting at the time, Richard Carr must have owned property here, while Andrew Carr may have lived at the same address.

The descriptions in the diary would have been written by Gilbert for identification purposes, much like the notebook on birds in the Queensland Museum (as previously discussed). The fact that they were transcribed into the diary could suggest that when Gilbert left Sydney for the Darling Downs he may have decided to leave the Queensland Museum notebooks with Bennett or Strange, though he could have equally taken them as far as the Darling Downs and left them with the Coxens.

Some of the pencilled descriptions in the diary have been covered by ink. When Gilbert ran out of space in the second volume he started writing in ink over the top of the descriptions in the first volume. Consequently the first ten of the 59 pages have been covered with diary notes from June 1845. Three pencilled bird names can be read amongst the ink notes, *Petrophassa albipennis*, *Grallina australis* and *Phalacrocorax leucogaster*, which were pictured in Parts X and XI of Gould's 'Birds of Australia'. There were undoubtedly further descriptions of birds from this work, though the original notes are no longer legible. Gilbert's untimely death prevented him from obliterating all the pencilled notes.

After these descriptions the diary entries begin in pencil and amount to 21 pages of text before Gilbert's account of the Port Essington Expedition begins in ink. In addition, there are a few pages of pencilled notes at the end of the volume. These refer to the collection of specimens, both before and during the Port Essington Expedition; Gilbert's diary notes for exploratory excursions away from the main party during the Expedition; and his initial attempt at a diary of the Port Essington expedition before he used pen and ink. Unfortunately many of these notes are illegible, with some of them out of chronological sequence.

GILBERT'S JOURNEY TO THE DARLING DOWNS

Gilbert's diary begins on 18 March 1844, when he noted that he left Sydney at 10 at night on the steamer 'Rose'. The following morning it travelled along the lower Hunter River (Fig. 1). Gilbert recorded in a footnote: 'The banks were

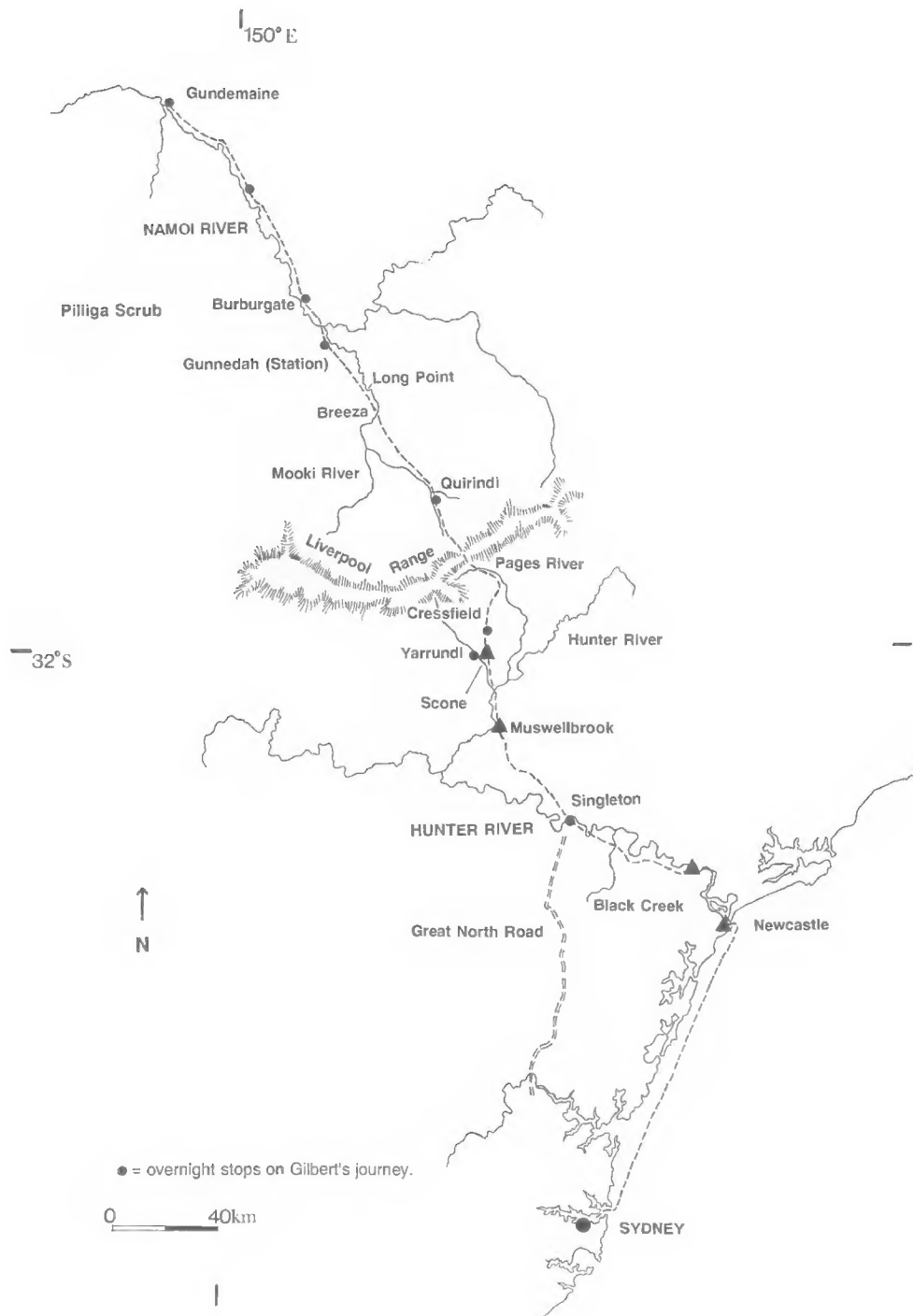


FIG. 1. Gilbert's journey north to the Darling Downs in 1844. Sydney to Gundemane.

generally low, with Mangroves or reeds lining the edges of the water but the most striking feature along the banks of the Hunter, as we passed rapidly in the steamer, was the almost exclusive cultivation of Indian Maize, so much so that on many of the located parts, this appeared the only grain attended to'. He wrote that he arrived at Maitland the same morning, however he crossed out Maitland and replaced it with Morpeth. The Sydney Morning Herald (SMH) for 19 March (Anon., 1844b) scheduled the coastal steamer 'Rose' to arrive in Sydney and leave for 'Pattison [=Patterson]' and Morpeth on 18 March.

In another footnote Gilbert added: 'Here I expected to find a horse in readiness for me to ride to Dartbrook [the creek at Yarrundi, Stephen Coxen's property], having by some unaccountable means supposed the distance I had to ride was about 12 miles [19km], but to my astonishment found it was 80 [128km] and to add to my chagrin no horse had been left for me, I therefore took a place by the mail'. In the notes there is no mention of Newcastle nor of an inn at this point as suggested by Webster (1980).

The 'mail' left at noon, and passed through Lochinvar 'little resembling its namesake in Britain counting only about a dozen houses', to Black Creek '19 miles [24 km] from Maitland'. This would be near the town of Brankton. Gilbert complained bitterly about the roads: 'occasionally on the road where the ground is soft you came to a road of heavy logs laid down, which very strongly reminds one of the log roads we read of in America, but this was not the worst part, for the major portion of the road is in very deep ruts, and the shaking I received in a very crazy vehicle, would have perhaps have had a beneficial effect had I been of a nervous temperament. However as it was I was tired and felt as if I had taken as much exercise as I could have done had I walked the distance!'. The roads between Maitland and Black Creek were notorious for being extremely boggy (Wood, 1972).

The diary at this point is very descriptive, giving details of topography and listing various genera of plants, then comparing and contrasting these with those of 'the Swan River colony'. The fact that he compared them with the Perth area and not Sydney, again suggests that he did not do much fieldwork near Sydney. This is emphasised by his comments that he: 'saw many familiar forms, although for a first time alive in a state of nature the several species of *Trichoglossi* [=Lorikeets]'. This is a surprising comment given that Lorikeets were probably in some numbers in

the Sydney area, while it is known that Gilbert had already sent Gould specimens of the Purple-crowned Lorikeet *Glossopsitta porphyrocephala*, Varied Lorikeet *Psitteuteles versicolor* and Red-collared Lorikeet *Trichoglossus rubritorquus* (Whittell, 1942a,b; also letter from Gilbert to Gould written in Port Essington 19 September 1840 in ML).

The mail crossed the Hunter River at a ford seven miles [11 km] further on, and crossed it again before reaching Patrick's Plains or Singleton, 'a scattered village on the left bank of the river'. This route is no longer followed by the New England Highway as there are no crossings of the river between Newcastle and Singleton. After he arrived 'at the principal Inn', Gilbert received a note explaining: 'the cause of not finding a horse left for me', but did not give the cause in the diary. At this point he gives the footnotes previously mentioned and this is the source of Webster's error.

At four o'clock the following morning (20 March) he left for Muswellbrook and Yarrundi near Scone. His diary indicates he went by coach as far as Scone but it was not possible for him to have visited Cassilis, over 100km further west (contra Webster, 1980).

The entry notes: 'at [blank] miles we arrived at Dartbrook'. This is the first mention that Gilbert was travelling in company with another person, as the coach would not have driven to Coxen's private property.

Most of the next two days' writing is illegible but he did not stay at Yarrundi long. In the pencilled section at the end of the first volume of the diary is a list of numbers that correspond with the distances (in miles) that Gilbert travelled each day going north. The first measurement is '80 From M', the distance from Morpeth to Yarrundi. The next measurement is '7' and this appears to be the distance travelled on 21 March. His entry for 22 March begins with him, 'leaving Cresfield crossed over Walden's Range ... to the Pages [River] from where we crossed the Liverpool Range for Loders where we remained for the night'. The property of "Cresfield" is some seven miles (11 km) north of Scone and the New England Highway now runs past here over 'Walden's Range' [= Warland's Range, see Wood, 1972] to the Pages River and the Liverpool Range (Royal Australian Survey Corps = RASC, 1970). This was, and still is, the major road north. "Loders" was the Loder brothers' property, near the present town of Quirindi (Wood, 1972; Goodwin et al., 1977).

Much as Chafer (1992) did, Albrecht & Albrecht (1992) inferred from Gould's instructions, that while at Yarrundi Gilbert was, 'undoubtedly collecting the specimens Gould had requested him to find'. However, given the period of Gilbert's stay (one day) it is unlikely that Gilbert collected any of Gould's desired specimens at all.

The following day he travelled 42 miles (66km) over the Liverpool Plains and passed a bend of the 'Mokai' [= Mooki] River known as Long Point. This bend is 7km north west of the town of Breeza (RASC, 1969). Gilbert noted that: 'from Long Point we moved on over the Plain to a station on the Mokai opposite Gunbunde'. In the 1840s, Gunnedah Station had two homesteads, one to the north and the other to the south of the property. Gilbert was apparently referring to the southern homestead, then owned by members of the Johnston family (Longmuir, 1956). The northern homestead, then known as "The Woolshed", was located at a ford of the Namoi River, now the site of the town of Gunnedah. The route travelled by Gilbert over the latter part of the day was that of the main road as mapped by the surveyor H. Gorman some eight years later (Gorman, 1852). On 24 March he notes: [After] 'Four miles [6km] we crossed River Namoi and in about 8 miles [13 km] came again upon the river at Mr Wentworth's cattle station there being a good feed we brought up for the day'. In the 1840s William Wentworth owned "Burburgate" some 10km northwest of Gunnedah (Campbell, 1931; Longmuir, 1956).

On 25 March they travelled a further 30 miles [48 km] down the Namoi through 'moderately timbered forest'. Gilbert noted that: 'the principal incident of the day was the immense numbers of the migratory grasshoppers, the whole of the last 15 miles [24 km] we were fairly riding through them, ... the whole scene as far as the eye could reach is greatly resembling a fall of snow while in many parts of the road they have collected in such masses as fairly to discolour the ground[,] about half way in this distance of [10?] miles [16 km] we stopped a short time at a house[,] we were informed they had been passing three whole days excessively, in along the grassy land[,] as they proceed the grass is completely eaten off[,] there we observed in the road and on bare pieces of ground were employed in scratching [sic] little round holes, and so numerous were these that the ground appeared completely honeycombed. I apprehend they are employed depositing their eggs ... in some places they were so thick that trees two

hundred yards [200m] distant can scarcely be seen through the cloud and when the wind is blowing they are constantly striking the face with their sharp claws till it becomes quite painful'. That evening, 'we had a storm of thunder & lightning with a little rain'. The following day, 'not a grasshopper was to be seen on the wing the rain of last night apparently [sic] having checked their progress for a time'. What Gilbert was describing was the breeding and movement of plague locusts *Chortoicetes terminifera* before a cold front (Woodruff, 1974, 1976).

On this day (26 March) they travelled a further 30 miles [48 km] to 'Gundamain'. "Gundemaine" (for spelling see Campbell, 1931) was some 11km northwest of the present town of Narrabri on the north bank of the Namoi just below the mouth of Brigalow or Bohena Creek (McLean, 1847; Hunt, 1980). It was also visited by Gould in 1839 (Gould, 1865; McAllan, 1987) and is immediately upstream of the Parish of Gommel, Gould's Gummel-Gummel where he had observed Little Woodswallows *Artamus minor* breeding (Gould, 1865).

At this point Gilbert gives a list of birds observed on his journey 'thus far':

'*Grallina Australis* [*G. cyanoleuca*, Magpie-lark] - *Artamus albobittatus* [*A. cyanopterus*, Dusky Woodswallow] - *Oreoica gutturalis* [Crested Bellbird] - *Hirundo neoxena* [Welcome Swallow] - *Collocalia arborea* [*Hirundo nigricans*, Tree Martin] - *Collocalia ariel* [*H. ariel*, Fairy Martin] - *Haliastur sphenura* [*H. sphenurus*, Whistling Kite] - *Ichthyaelus leucogaster* [*Haliaeetus leucogaster*, White-bellied Sea Eagle] - *Pandion leucocephalus* [*P. haliaetus*, Osprey] - *Milvus isurus* [*Lopholictinia isura*, Square-tailed Kite] - *Falco frontatus* [*F. lunulatus*, Australian Hobby] - *Accipiter torquatus* [*A. cirrocephalus*, Collared Sparrowhawk] - *Aquila fucosa* [*A. audax*, Wedge-tailed Eagle] - *Corvus coronoides* [Australian Raven] [blank] - *Halcyon sanctus* [*Todirhamphus sanctus*, Sacred Kingfisher] - *Perdix australis* [*Coturnix ypsilophora*, Brown Quail] - *Anthus australis* [Australasian Pipit] - *Phaps chalcoptera* [Common Bronzewing] - *Columba spilonota* [*Geopelia cuneata*, Diamond Dove] - *Mycteria Australis* [*Ephippiorhynchus asiaticus*, Black-necked Stork] - Wood Duck [*Chenonetta jubata*] - Black Swan [*Cygnus atratus*] - *Rhipidura motacilloides* [*R. leucophrys*, Willie Wagtail] - *Seisura volitans* [*Myiagra inquieta*, Restless Flycatcher] - *Ardea Novae-Hollandiae* [*A. novaehollandiae*, White-

faced Heron] - *Ardea pacifica* [White-necked Heron] - *Aegialitis nigrifrons* [Elseyornis melanops, Black-fronted Dotterel] - *Otis Australis* [*Ardeotis australis*, Australian Bustard] - *Amadina castanotis* [*Taeniopygia guttata*, Zebra Finch] - *Fulica australis* [*F. atra*, Coot] - *Petroica bicolor* [*Melanodryas cucullata*, Hooded Robin] - *Melopsittacus undulatus* [Budgerygah] - *Graucalus melanotis* [*Coracina novaehollandiae*, Black-faced Cuckoo-shrike]. The nest and [eggs of?] *Peristera* [*Phaps histrionica*, Flock Bronzewing].

Some of these birds, such as the Black-necked Stork, Osprey and the White-bellied Sea Eagle were probably seen on the lower Hunter River, though most could have been seen further inland (Morris et al., 1981). Gilbert's record of Square-tailed Kite, however is open to question given his difficulty in identifying this species during the Port Essington Expedition the following year (Debus et al., 1993).

The order of species in the above list is similar to the first part of a list that Gilbert sent in a letter to Gould from the Darling Downs dated 8 June 1844 (Fisher, 1985). This suggests that Gilbert was either using the list in the diary to jog his memory, or that a number of species in the letter written on the Darling Downs were not seen on the Downs at all.

Gundemaine was obviously an intended stopping place as they did not leave until 3 April. While here Gilbert collected and observed a number of animals. On 30 March he recorded in his pencilled collection notes: 'A nest of *A. [madina] modesta* [*Neochmia modesta*, Plum-headed Finch]. The nest formed of dry wiry grass, but not [blank] so long a spout as the Swan River species, lined with feathers, the nest placed in a thick bush on the banks of the river, and so near the ground the bottom of the nest was almost touching. contained five eggs. another nest I saw yesterday had two young and two eggs. this was built in a small bush about two feet from the ground. This is the second breeding of these birds, attributable in a great measure from the long continuance of summer weather. Gundamain, River Namoi'. One of these nests was obviously collected, as Gould mentioned Gilbert providing him one (Gould, 1865). He also noted a '*Lepidostias Long Mouth'd Fish*', which he presumably collected, though its identity at present remains unknown (T. Trnski, pers. comm.). The following day he recorded: 'eggs of *C[olumba] spilonota* [*Geopelia cuneata*, Diamond Dove] taken 1 April 1844 banks of the Namoi. small loose nest made

of sticks'. While he also noted: 'Teen=burn Aborig. of Namoi *Podiceps* — [= Grebe sp.]'.

On 3 April they travelled to 'Goolathra at a distance of 11 miles' [18km]. 'Galathra' was a property acquired by William Wentworth some time before 1848 (Campbell, 1931; Fig. 2) and was on Galathera Creek to the north of Gundemaine (RASC, 1988). Gilbert collected a Letter-winged Kite *Elanus scriptus* at this locality and gave it the Aboriginal name of 'Til=yeer=gar=bul' (pencilled collection notes).

During the day Gilbert: 'saw *Peristera histrionica* [*Phaps histrionica*, Flock Bronzewing]. the species I obtained the eggs of a few days ago. they were very abundant. breed on the ground lay two white eggs'. Gilbert's sightings of this species near Gundemaine and collection of eggs seem to have gone largely unnoticed in the literature, for example Frith (1982) noted: 'Gould encountered large groups on the Namoi but apparently they have not been seen again in the district'.

Gould himself never mentioned receiving the eggs that Gilbert collected and in his Handbook account only gave the details of eggs collected by Sturt north of the Barrier Range (Gould, 1865). This is surprising as Gould had looked at the diaries when he referred to Gilbert's records of Flock Bronzewings from 'the plains in latitude 19°S', that is, on the Port Essington Expedition. Moreover Gilbert had also told Gould in his letter of 8 June 1844 that he had collected the eggs. This letter did reach England as Gould himself acknowledged this (Fisher, 1985; draft of letter from Gould to Gilbert dated 20 December 1844 in National Library of Australia, Canberra, hereafter NLA). As noted by Chisholm (1944) Gould was erratic with his reference to Gilbert's diary, occasionally quoting minor incidents in great detail while ignoring others altogether.

On 4 April 1844 Gilbert's party travelled, '10 miles [16km] in continuance of *Peristera Creek*', presumably referring to the creek now known as Ten Mile Creek. Gilbert noted: 'during the morning immense flocks of *Peristera histrionica* started found two of them breeding[,] 2 eggs on the bare ground. 4 miles [6km] to a second creek like all the former running across the plain. from this 6 miles [10km] to a small creek tracing a branch of the Waterloo Creek where we stopped the night at a Sheep Station'. The second creek passed would have been the creek now called Boggy Creek while the creek at which they stopped would have been Gehan Creek, the creek to the south of Millie Creek. In 1844 Millie Creek

was known as Waterloo Creek, presumably after the property of the same name which is on this creek near the Newell Highway (Gardiner, 1844; RASC, 1982). Gilbert also recorded that he 'saw the *Artamus cinereus* [Black-faced Woodswallow]

On 5 April, Gilbert, 'Travelled over plains [...] at one mile [1.6km] crossed a creek 4 miles [6km] on crossed a second'. He records the presence of grasshoppers again while he also noted: 'shot a Bustard [Australian Bustard, *Ardeotis australis*] ... *Peristera* very abundant. *Peregrine Falcon* [*Falco peregrinus*] and *Milvus* [= Kite sp.] in great numbers the birds feeding freely upon grasshoppers. A further distance of 10 miles [16km] brought us to Bombell[,] a Station on Myall Creek'. From the distances quoted it appears the first creek crossed in the day was Waterloo Creek, the second being Little Bumble Creek and Gilbert's 'Myall Creek' was the creek now known as Gurley Creek (RASC, 1982, 1987). At the time there was a property on Gurley Creek known as "Bumble" (Galloway, 1854). Gilbert's specimen collection notes also record him collecting a 'Mus' at Myall Creek which is confirmed in the diary.

On 6 April they, 'remained stationary all day. In a ramble up and down the creek I saw many birds for the first time in a state of nature among the most remarkable *Chlamydera maculata* [Spotted Bowerbird] and the Crested Bronzewing [*Ocyphaps lophotes*, Crested Pigeon]'.

On 7 April they travelled eight miles [13km] to 'Bowman's Creek'. This was the name of the creek that passed through George Bowman's property, "Terry Hie Hie" and is now known as Tycannah Creek (Wiedemann, 1981; Division of National Mapping, 1975; RASC, 1987). This distance is the same as that from Gurley Creek to Tycannah Creek at the town of Tycannah when coming from the south west. The main road at the time veered to the west from Gundemaine north to Tycannah while the present Newell Highway goes straight north from Narrabri (Gardiner, 1844; McLean, 1847; RASC, 1987). While at Tycannah Creek, Gilbert noted: 'water in small pools in which I caught a fish very like the Common Rouch'. This was no doubt a species of fish he referred to in his pencilled descriptions as 'Peer=nga'.

They then travelled, '7 miles [11km] further on in distance [several illegible words] Halls Station on the Big River [=Gwydir River], and then on[,] on to the plains ... Here I saw the *Graucalus phasianellus* [*Pteropodocys maxima*, Ground

Cuckoo-shrike] feeding on the ground. Park like open country [...] Bivouaced on [blank] creek running parallel with the river'. The distance given by Gilbert does not actually reach the Gwydir River but falls some three miles (5km) short at a creek now known as Halls Creek south of the present town of Moree. From his pencilled description referring to the collection of a fish known as 'Pob=be' on 'Mr Hall's station]... Big River', it can be seen that Gilbert was at the property of George Hall who owned "Webollabolla" east of Moree which is itself two miles [3km] south of the Gwydir (McLean, 1847; Campbell, 1931). There was probably no settlement at Moree at the time as James Cox obtained his licence for this station some four months later (Jervis, 1963). This disparity in distances is addressed by Gilbert when he noted in his list of mileages at the end of the volume an unaccounted five miles [8km], the distance from Halls Creek to the Gwydir River via Webollabolla.

The following day they were again stationary. His diary refers to, 'a new fish', undoubtedly the 'Pob=be' recorded as coming from, 'Mr Hall's' station. Gilbert gave counts of the spines of the fish that, by themselves, do not identify the species (S. Reader & T. Trnski, Australian Museum, pers. comm.). A description of the fish is also partly legible and it reads: 'colour of the upper part light [several illegible words] body and had bright red spots'. The 'Pob=be' is probably the fish now known as the Spangled Perch *Leiopotherapon unicolor*. Described as *Therapon unicolor* by Günther in 1859, its type series in the BMNH was collected at 'Gwydir River' and 'Head of Mosquito Creek, near Darling Downs' and appears to have been collected by Gilbert (Fisher, 1992). Furthermore this species does indeed have bright red spots on its body.

On 9 April they went '8 miles [13km] up river to Moki=branch [=Mehi Branch]'. Gilbert actually noted the reverse of the present names. At present Moree is considered on the Mehi Branch of the Gwydir with the main branch flowing to the north-west. At the point where they stopped for the night Gilbert noted: 'Here met with the greatest encampment of Natives we have hitherto seen and at night every one [spending some?] considerable time with their noisy corroboree, or what might be termed vociferous screaming'. On 10 April they were again stationary and Gilbert noted: 'Natives all day'. On the 11th they travelled ten miles [16km] up river to 'Eaton Station 3 further to Eales'. According to



FIG. 2. Gilbert's journey north to the Darling Downs in 1844. Gundemains to the Darling Downs.

Campbell (1931) Daniel Eaton held "Binnigy" [now = Biniguy] while John Eales was the licensee of "Yagobi" [= Yagobe] (Barker, 1987).

On 12 April they travelled 12 miles [19km] cutting off some bends of the river. They stopped for two hours and then went a further eight miles [11km] finishing the day at the station owned by 'Gally'. This was George Gally, who lived at "Gingeroi" (Barker, 1987). However Gilbert, 'did not meet with the usual hospitality at Gally and went to bed on a midshipmans supper'. The area covered in this last stage was, according to Gilbert, dominated by an ironbark with a very dark trunk and branches and contrasting glaucous leaves, possibly *Eucalyptus caleyi*. From this point on large parts of the pencilled diary are illegible, and in many instances little more than Gilbert's movements can be discerned.

They travelled for 12 miles [19km] on 13 April and the following day a further nine miles [14km], 'leaving the Big River'. It would appear they were travelling up Myall Creek which Gar-

diner (1844) again noted as a major route. The account for 15 April is totally illegible, while they were stationary on 16 April. On 17 April they travelled 23 miles [36km] and reached a Mr Waterford's station. In 1844 William Waterford owned "Bannockburn" some 19km north west of Inverell (Wiedemann, 1981). This would suggest that on 15 April they passed near the locality of the present town of Delungra. On 18 April they reached 'Wyndham's Station on the MacIntyre', which was "Bukkulla", owned by George Wyndham. The entry for 19 April is largely illegible and the following day they were 'stationary all day to rest the cattle, see no Natives at all now.'. This is a suggestion that they were moving stock and that Gilbert may have been concerned about Aborigines, though their intent was not indicated.

On 21 April they moved, '9 miles [14km] down the Fraser [= Frasers Creek] to Blaxland's Station'. Gregory Blaxland owned "Fraser's Creek" at this time, some 11km north of the

present town of Ashford (Wiedemann, 1981). Thus on the 19th they had moved to three km south of Ashford. On 22 April they travelled 14 miles [22km] to 'Hatherington's Station', this was "Bonshaw" which was owned by the Reverend Irving Heatherington at the present town of the same name. Bonshaw is on the Dumaresq River, now the border between New South Wales and Queensland.

On the 23rd they moved, '12 miles [19km] down the Severn over a hilly country to Cox's Station. here we have to wait for the rest following us with sheep and a cart with Provisions so that we can travel farther'. William Cox held "Gunyan" station at about this time, to the south-east of the present town of Texas (Wiedemann, 1981). Gilbert's collecting notes record that he collected a '*small Antechinus*' on 23 April and gave it the Aboriginal name of '*Ne-moo-ga*'. He also collected a '*Circus*' (harrier) species, '*on the Severn April 23rd 1844*'. He had actually travelled along the Severn River as it is now known, two days before when passing the location of Ashford. This was a consistent mistake in Gilbert's notes and corresponds with occasional use of the name Severn for the Dumaresq River (Hamilton, 1960; Division of National Mapping, 1976).

From here on the diary is particularly difficult to read. In the period from 24 - 28 April Gilbert comments at length about fighting between the Aborigines and Europeans in what is now northern New South Wales and southern Queensland. He began by referring to the large number of Aborigines that had been killed in '*the New England district ... one instance I heard of a party going out with the [expressed?] purpose of hunting Natives*'. He also noted that one group had '*indiscriminately slaughtered their women & children*'. In short, Gilbert described it as, '*cruel warfare*'.

The fighting had not been all one way, for Gilbert mentioned problems that the Europeans had had with Aborigines in the Barwon and Mooni river areas. Jervis (1962) points out that a number of the stations on the Mooni River were abandoned during 1843 because of Aboriginal attacks, while there were numerous incidents on the Barwon River where both Blacks and Whites were killed. So great had been the animosity that according to Gilbert, the Europeans, '*came to the determination of exterminating the whole of the Natives on the Mooney*', and that this had come, '*into effect within the last 18 months*'.

He also recounted a specific incident where the

Aborigines attacked a group of Europeans: '*Several of the modes of attack were certainly very daring, at one station, they came down a hill at the back several hundred en masse, well armed with spears and boomerangs, all the fighting men surrounded the hut and stockyard and then cut off all chances of the people obtaining their horses. they then chose from a number of cattle in the yard the fattest which was [at once?] deliberately speared*'. The fragments that can be read of the remainder of this incident include the burning of fences and, '*the people who were in the hut ... were obliged to attempt to save themselves, some only succeeding in this. the hut was then burnt down*'.

Gilbert suspected that '*the lower classes of Society*' were:

'in league with the Barwon Blacks for many of their plans of attack have been as new and different from the Aborigines usual plans such as driving away a herd of cattle and making temporary yards each night, and after getting them to an uninhabited part of the country, regularly herding them and killing a beast as they required a fresh supply of food, this I understand has been done, which is far too systematic a proceeding for any savages to follow out without some tutoring from whites although it is not proved that any of our own countrymen are really guilty of such a crime still it is well known there are hundreds of men quite capable of such things.

Generally speaking the working classes, that is to say the labourers of New South Wales entertain a thorough dislike to the Natives being on an establishment, considering that where a native is employed, it is to the exclusion of one of their own class, this jealousy caused them to show them dislike in various ways and it is through outrages upon the Blacks by this class of persons, that account of the outbursts may be attributed'.

Gilbert's opinion of the cause for enmity between the Aborigines and Europeans ignored the fact that the Europeans had invaded the Aborigines land less than ten years before (French, 1989). Yet the tensions would hardly have eased as a result of the character of the people who were likely to be the shepherds and stockmen of the time. In 1843, James Demarr described his fellow shepherds on the Darling Downs as '*the vilest scoundrels and ruffians, who thought no more of shooting a stray blackfellow than they would a mad dog*' (French, 1989).

It has been suggested that Gilbert greatly feared Aborigines (Webster, 1980), though any prudent European would at that time. As noted above

there had been a number of attacks on Europeans on the Barwon, MacIntyre and Darling Downs areas at around this time (Jervis, 1962; Wiedemann, 1981; French, 1989). Indeed in early 1843 Charles Coxen, Gould's brother-in-law, was attacked by Aborigines near the present city of Toowoomba while one of his employees was also attacked on his property "Jondaryan" (French, 1989; Anon, 1843).

While at the 'Severn' Gilbert recorded in his collecting notes '*Moo=ling=ga Spotted-throated Finch. Irides reddish yellow*'. The only finch with spots on the throat and reddish yellow eyes that could have been in the area is the Star Finch *Neochmia ruficauda*, a species now extremely rare in eastern Australia. Gilbert then collected, '*Amodina lathumi* [*Stagonopleura guttata*, Diamond Firetail]', again giving the bare-part colours, the Aboriginal name '*Ngao=re moo=ga ra*', and noting that it was '*Killed on the Severn. April 24*'. He also recorded that: '*On the Severn I saw a pair of the banded Red-knee* (presumably the Red-kneed Dotterel, *Erythronyx cinctus*), *Ardea pacifica* [White-necked Heron]'

On 29 April Gilbert noted: '*The party with the sheep came up to day's preparation for tomorrow's stage*'. The following day, 30 April, they had barely started for the day, '*when about 3 miles [5km] the wheel would not turn ... being Mair's patent axle tie it was too complicated too get off very easily and night coming on we gave it up as hopeless*'. That day and the next night it rained and on the following day they were again stationary while they took the wheel off.

On 2 May they started again but, '*moved about mile & half [2km] to McDougalls Station where we pitched our tents. the day still raining*'. John McDougall occupied "Collebelaa" in 1840 on the site of the present town of Texas (Wiedemann, 1981). As this was only in the next valley from Cox's Station it appears that the period from 24 to 29 April was spent at the latter locality.

The following week Gilbert regularly commented on the boggy roads, presumably caused by the rain from 30 April to 2 May. On 7 May for example, Gilbert noted that with, '*each step sinking up to the knees, added to this we were constantly breaking our better set of harness*'. On 8 May Gilbert noted: '*here some blackfellows came up the first we have seen here*'.

Much of the remainder of the pencilled notes are illegible though on 9 and 10 May he was at Mosquito Creek where he presumably collected further specimens of the Spangled Perch. On 13 May he noted that they '*were following the Canal*

Creek we arrived at Pitt & Bonaparts', no doubt the same Pitt that Leichhardt had visited the year before (Aurousseau, 1968). In the next few days the diary mentions reaching the Condamine River. This suggests that the route followed since leaving the McDougall's property was the stock route pioneered by Patrick Leslie in 1840 (see French, 1989).

The brief final entries for the journey can be read in full. They are as follows:

Fri 17 [May] To Gores New Parrot
Sat 18 [May] From Gores head Station to Sheep Station 16 Miles [26km]
Sun 19 [May] To Russells & Brookes 9 Miles [14km]
Mon 20 [May] To Old Station 5 Miles [8km]
Tues 21 [May] To Coxens 10 Miles [16 km].

St George and Ralph Gore's Station was "Yandilla" on the Condamine River (French, 1989; RASC, 1978). The '*New Parrot*' concerned was the Paradise Parrot *Psephotus pulcherrimus*. This date corresponds with that given on the tag of specimen D789a in the National Museums and Galleries on Merseyside (hereafter LIVCM), Liverpool, United Kingdom, considered a paratype by Fisher (1986). This specimen has the original label written in Gilbert's hand, '*Male. May 17 1844, Condamine River, Darling Downs, New South Wales*', and reverse, '*Irides Dark Brown*'. It is the first specimen of this species that Gilbert collected, though his comments in a letter to Gould indicate that it was not the only specimen of the Paradise Parrot that he collected (Fisher, 1985, 1986).

Given that the party was travelling between five and sixteen miles [8 and 26km] each day for the last few days of the journey to Coxen's station it would appear that the specimen was collected between "Yandilla" and the previous station upstream on the Condamine River, "Tumaville", owned by Dr John Rulland and Domville Taylor.

As to the remainder of the journey, Henry Stuart Russell and Gerald Brooks occupied "Cecil Plains" further downstream from Yandilla in 1841 and it was this station Gilbert reached on 19 May. Gilbert's distances for the last two days appear to be incorrect. The distance from "Cecil Plains" to Charles Coxen's "Jondaryan" is 25 miles [40km] and not 15 miles, while it was even further to the other Coxen property, "Myall Creek". Although Gould's nephew, Henry W. Coxen, had occupied "Myall Creek" in 1842, it was then considered to be the northern part of Jondaryan. The first house on "Myall Creek" was

not built until 1846 (French, 1989; Challinor, 1919; Russell, 1888).

The question remains as to the identity of the people who were travelling with Gilbert. He cannot have travelled with either Stephen or Charles Coxen as they were both in Sydney signing insolvency papers at the time Gilbert was at the Dumaresq River (C. Coxen, 1844; S. Coxen, 1844). Some clues to his companions are found in a newspaper article which concerns the Coxen family (Challinor, 1919). This article is based on a series of notes dictated by Henry W. Coxen to his son H.C. Coxen on 14 September 1888 (letter and notes now in ML).

Challinor noted that in 1842 H.W. Coxen took 'two drays, 300 cattle, three men and a black boy' to the Darling Downs. One of the men was a Licutenant Irving, but the names of the others were not given.

The article further recounts: *'On the way and between the Severn River and Canal Creek one of the drays broke down - a serious incident in those far off days. Irving took on the other dray, the cattle, and the broken axle which he got repaired by Arthur Hodgson's blacksmith at Eton Vale [south-west of Toowoomba]. A month elapsed before the mended axle was returned to Coxen, and during the interval among other difficulties encountered were attacks by wild aborigines and a very severe illness. Here it was that S. and H. Russell, Brookes and Glover passed on their way North'.*

In the original notes there is the further information that in around 1843 or 1844 H.W. Coxen, 'undertook to overland 3000 sheep from Homebush [in Sydney] to the Downs via Wiseman's Ferry and the Wallambi Mountains [= Wollombi] over which progressed one mile a day the journey occupied six months camping out all the time'. The route that H.W. Coxen described through to the Hunter Valley is the Great North Road which went from Wisemans Ferry to Wollombi and then to Singleton.

There are a number of errors in both the newspaper and manuscript versions, for example the sequence of events relating to the Leichhardt expedition are incorrect. Thus it is possible that parts of H.W. Coxen's account may be confused, with the axle breaking on his second delivery of stock and not the first.

Gilbert appears to have been involved with the overlanding of stock, both cattle and sheep, although apparently not before reaching Gundemaine. It is not surprising that H.W. Coxen had Gundemaine as a major stop, for apart from being

about half way to the Darling Downs he had worked on the station in either 1841 or 1842 (Challinor, 1919). Indeed, as noted before, his uncle, John Gould, had also visited this station.

Before reaching this locality Gilbert was regularly travelling 48km each day. After leaving Gundemaine, where he stayed at least six days, the furthest travelled in a day was about 36km, though it was usually less than 20km. Even so, these distances are surprisingly long for stock to travel in a day, which was usually about 14km per day for cattle and 10km per day for sheep (see for example Crawford, 1993: 177). We know from Gilbert's comment on 20 April that he was travelling with a party with cattle. From the number of stationary days, five days in the three weeks between Gundemaine and Cox's station, it appears the strategy was to drive the cattle hard for a number of days and then let them rest for a day. The longer stop at Cox's station allowed for the party with the sheep to arrive before they travelled east over the sparsely occupied country to the Condamine River. This strategy may have been used to reduce contact with Aborigines and, fortuitously, allowed Gilbert time to collect specimens.

GILBERT ON THE DARLING DOWNS: HIS COLLECTIONS

Again, virtually nothing is known of Gilbert's activities between 21 May and 18 September 1844 when the Port Essington Expedition left John Campbell's property "Westbrook". He wrote a number of letters. Three survive, one each to Gould, Bennett and Strange on 8 June, 10 September and 16 September respectively (reprinted in Fisher, 1985; Whitley, 1938; Whittell, 1947).

The first letter refers to the collection of the type specimen of the Paradise Parrot and a list of species seen, but as noted, it is possible a number of these may not have been seen in the area at all. The other two letters reveal that Gilbert did not do much travelling or collecting. In his letter to Bennett he wrote:

'During the short time I have been in this district I have been able to do but little, the weather has been so unpropitious, the whole time, as to prevent me moving about the country; I have a new Parrakeet nearly allied to Platycercus haematogaster [Psephotus haematogaster, Blue Bonnet], but a much more beautiful bird, and I have several new species of Mus, and four new species of Grays genus Antechinus, and many

other novelties particularly fresh water shells & Fish. ... I have collected many interesting seeds for Mrs. B. which I shall send down with my collection to Mr. Strange to repack, at the same time giving him directions to take out a package of the most interesting'.

In his letter to Strange he gave the further information:

'I have packed up a small collection for Mr. Gould, and you would oblige me very much by sending them off by the first, and post the enclosed letter by the same vessel, the reason of my sending so small a collection is that I have determined on joining Dr. Leichhardt's overland expedition; would you not like to go? ...'

'I only received your letter of the 17th July a few days ago, and of course have not yet received my boxes you have been kind enough to send, and the letter you sent from Mr. Lefroy I cannot hear anything of, although repeated enquiries have been made for me at the Post Office. ... You can unpack the box and look at the specimens, and if not giving you too much trouble, perhaps you will get a tin top soldered on to make it more secure; the only thing new in the collection is the parrot I mentioned to you in a former letter, and the smaller Quadrupeds, which I think are nearly all new. I am sorry I have not been able to get you a few beetles, but the weather has been so cold and cheerless that scarcely any insects are to be found'.

Gilbert wrote that he had not moved far in the four months he spent in the area. In the pencilled notes immediately before the Port Essington Expedition diary begins is the annotation: 'Wallaby killed at Pearce's about the size of *manicatus* [*Macropus irma* Western Brush Wallaby] general [blank blank] having a white stripe on the cheek, red patch [illegible to end]'. This suggests that he may have at some stage visited J.C. Pearce who lived at Helidon east of Toowoomba (French, 1989).

The identity of the Wallaby remains a mystery, though Gould (1849) noted that Gilbert found that the Bridled Naitail Wallaby, *Onychogalea frenata*, 'was common in the thick patches of scrub which are dispersed over all parts of the Darling Downs'. There are two Gilbert specimens of this species in the collections of the British Museum (BMNH 53.10.22.28, BMNH 53.10.22.29). The first was 'No 9' collected at 'Oakey Creek, Darling Downs' with no other information, while the second was collected on 'Aug. 19 1844' with the locality given as 'the

brushes of Oakey Creek (C.T. Fisher, pers. comm.)'.

It is not known whether Gould received any specimens from Gilbert beyond the 'small collection' that was sent via Strange. From these specimens, Gould named two birds, four mice and one dasyurid (Gould, 1845a,b, 1846a, 1858a).

Gilbert sent a number of mice in his 'small collection'. The pencilled collection notes refer to a number of possible 'Mus' species and other taxa that were collected while he was near the Namoi and Gwydir Rivers. The notes in part read:

'Til=yeer=gar=bul *Elanus scripta*.

Irides bright reddish brown, bill black.

Legs & feet yellowish white, claws black.

killed at Goolathra April 4 1844.

Mus — Boo=i=hi Aborig. of Myall Creek.

[crossed out name] Aborig. of Namoi

Inhabits the fissures on the open plains north of Gundamain. first specimen caught 5 April 1844.

Small Mus - Dil=pea Aborig. Myall Creek

Seen=be Freshwater Musclee

Peer=ngu Small Freshwater Roach caught in small pools of Bowman's Creek.

Fish caught in a creek near Mr Hall's [blank blank] Big River.

Pob=be of the Natives of the Big River [count of spines, plus partly legible description]

Small Mouse like House Mouse. Tar=li of the Natives. very abundant on the plains

Peer=nga [count of spines, plus description]'.

This sequence of entries creates a number of problems. First the account is not strictly in chronological order as the 'Peer=nga' description was written after Gilbert had arrived at 'the Big River [=Gwydir River]', though it was collected at Bowman's Creek further south the day before the collection of the 'Pob=be'. Another problem is the use of the locality 'Myall Creek'. From the chronological sequence the 'Myall Creek' concerned is the first that Gilbert crossed which is now known as Gurley Creek. He later passed a Myall Creek near Delungra, another creek of the same name near Bonshaw and finally the Coxen's unoccupied northerly station had the same name. However it must be assumed that all the specimens with the locality so named were from Gurley Creek.

One of the first 'Mus' supposedly collected by Gilbert from this period was the New Holland Mouse, *Pseudomys novaehollandiae*. In 1856 Gould noted, 'Mus Novae - Hollandiae ... I have now before me additional specimens ... collected

on the banks of the Gwydir, where they were procured by Mr. Gilbert. ... Mr. Gilbert states that, when travelling among the high grass in the neighbourhood of the Gwydir, he constantly started it from out of the fissures in the dry ground'. However this species is now unknown from inland Australia, and rather than being found in grassland it tends to be found in regenerating heath (Strahan, 1983). Records of this species from the Pilliga Scrub were later found to be of a distinct species *P. pilligaensis* Fox & Briscoe, 1980, the Pilliga Mouse (Watts & Aslin, 1981; Strahan, 1983). So either Gould misidentified the specimen, or misread Gilbert's notes or Gilbert's original label was placed on the wrong specimen.

Several possibilities arise from these alternatives. The New Holland Mouse referred to by Gould may have been a Plains Rat, *Pseudomys australis*. In 1853, under *Hapalotis murinus*, a synonym of the Plains Rat, Gould noted: 'The original specimen from which my description was taken was procured by Mr. Gilbert on the plains bordering the rivers Namoi and Gwydir [sic], where the natives informed him it was very abundant'. There is a specimen in the BMNH, number 53.10.22.4, apparently collected by Gilbert on the 'Plains near the Namoi River', with the tag 'No. 2.' (J.A. Mahoney's unpublished catalogue of Australian Muridae in the BMNH, in the Australian Museum). The habits suggested by Gould for the New Holland Mouse actually match the habits known for the Plains Rat and also correspond with Gilbert's comments for the 'Mus — Boo=i=bi' he collected on 5 April at 'Myall Creek [=Gurley Creek]'.

The BMNH also holds a specimen (BMNH 56.10.28.4) of the now extinct *Pseudomys gouldii*, Gould's Mouse. This is labelled 'No. 4. Gwyder River Plains, New South Wales' in Gilbert's hand. Gould's account for this species in the 'Mammals of Australia' makes no mention of any collection of this species from the Gwydir River by Gilbert (Gould, 1855). The size range of the Gould's Mouse matches Gilbert's reference to the collection of a 'Small Mouse like House Mouse. Tar=li of the Natives', and is also similar in size to the New Holland Mouse. Thus Gould's Mouse could also be the species with which Gould confused the New Holland Mouse.

Gilbert's 'Tar=li of the Natives', also recalls another taxa described by Gould. In 1857 Gould wrote of *Mus lineolatus* Gould, 1845 [another synonym of *Pseudomys australis*, Plains Rat]: 'This species of Mus was discovered by Mr. Gil-

bert on the Darling Downs, where it appears to be abundant. ... Mr. Gilbert states that it is called the Yar-lie by the Natives of the Darling Downs; that it is common in all the open parts of the grassy plains, and that he believes it is confined to the interior of the country..'

Gilbert's 'T' in the pencilled notes here looks like a 'Y' and so is undoubtedly referring to the same animal. Gould's error suggests that he was looking at this section of Gilbert's diaries when writing his account in 1857. However the animal referred to by Gould may not correspond with Gilbert's 'Tar=li', as the Plains Rat is much larger than a House Mouse, *Mus domesticus*. The lectotype of *Mus lineolatus* [= *P. australis lineolatus*], BMNH 58.11.24.4, is labelled 'July 1844' and 'No. 6', as is a paralectotype in the LIVCM (Fisher, 1984; Mahoney Catalogue). There are another two undated specimens from the Darling Downs in these Museums which are considered paralectotypes. Gilbert only visited the Darling Downs in May to September 1844, so the Plains Rat may have been collected at both the Darling Downs and the Namoi-Gwydir area, and Gould incorrectly referred to the Darling Downs Aborigines as the source of the name 'Tar=li'. The Plains Rat has never again been reported alive from New South Wales nor south east Queensland. It is now rarely reported elsewhere and could be close to extinction in the wild (Breed & Head, 1991).

From the above it can be seen that Gould may have made several errors with information concerning these mice: 1, he used Gilbert's notes on the habits of the Plains Rat (as *Hapalotis murinus*) for the New Holland Mouse; 2, he may have referred to Gilbert's specimens of Gould's Mouse *Pseudomys gouldii*, under his account of the New Holland Mouse; 3, he incorrectly referred the name 'Tar=li' as used by the Aborigines of the Namoi-Gwydir area to the Aborigines of the Darling Downs; and, 4, 'Tar=li' may have actually referred to Gould's Mouse and not the Plains Rat (as *Mus lineolatus*).

The third species of mouse described by Gould from the collections sent from the Darling Downs was *Mus gracilicaudatus* [= *Pseudomys gracilicaudatus*, Eastern Chestnut Mouse] which was collected at 'Oakley Creek' [= Oakley Creek] (Gould, 1845b). This is the creek on which Jondaryan is situated. Gould later considered this name a junior synonym of his *Mus lineolatus*, and so did not discuss it further, but it is now thought to be a separate species (Gould, 1863; Mahoney & Posamentier, 1975; Watts & Aslin, 1981). A

single specimen, BMNH 58.11.24.3, considered the holotype, was collected from 'Oukey Creek - Darling Downs' and labelled by Gilbert as 'No. 15' (Mahoney catalogue; C.T. Fisher, pers. comm.).

The fourth species of 'Mus' was described by Gould much later in 1858 as *Mus sordidus* [= *Rattus sordidus*, Canefield Rat]. There are four specimens of this form that may have been collected by Gilbert. One LIVCM D407, has the label 'Darling Downs' in Gould's hand (C.T. Fisher, pers. comm.). The other three, including the lectotype and paralectotype designated by Thomas in 1921 are in the BMNH and are all labelled 'No. 7'. One of these, the paralectotype, BMNH 58.11.24.5, has an original Gilbert label "No. 7. July 1844. Open Plains, Darling Downs, New South Wales". The Canefield Rat was said by Gould (1858b) to be the:

'*Dil=pea* of the Aborigines of New South Wales ... Very fine examples of this robust and compact Rat were procured by the late Mr. Gilbert on the Darling Downs in New South Wales. At present these specimens are in my own collection, but when this work is completed, they will form part of the rich stores of the British Museum. Mr. Gilbert states that it is common on the plains, and is occasionally found on the banks of the creeks, and adds, that it mainly feeds on the roots of stunted shrubs'.

From Gilbert's pencilled notes it can be seen that the mouse that he referred to as '*Dil=pea*' was actually a '*Small Mus*' which he collected at Gurley Creek. Far from being small, the Canefield Rat is one of the largest of the native rats in the genus *Rattus* (Watts & Aslin, 1981; Strahan, 1983), and indeed Gould considered it '*robust*'. In this instance there may have been an error with labelling and Gilbert's label is now on the wrong specimen.

The Canefield Rat has never been recorded again from south east Queensland, nor has it been recorded from inland New South Wales, though it has been recorded from coastal north east New South Wales. Similarly Watts & Aslin (1981) thought that Gilbert's habitat and feeding observations did not correspond with information known for this species.

The problem thus arises as to where these specimens of the Canefield Rat and the New Holland Mice were collected. One possibility is that they were collected closer to the coast, perhaps near Helidon. However Gilbert made no mention of specimens collected there other than his wallaby, while it is not even certain that he

went there. In any case the New Holland Mouse has not been recorded from Queensland (Watts & Aslin, 1981; Strahan, 1983). The most likely explanation is that the specimens of the Canefield Rat were not collected by Gilbert at all, but by another collector, Frederick Strange.

During 1844 Frederick Strange travelled widely along the north coast of New South Wales acquiring many specimens. In mid-April he collected specimens on the lower Hunter (Anon, 1844c). Later in August, Strange visited Port Macquarie and returned to Sydney on the coastal steamer, the *Maitland* on 22 August (Anon, 1844d). On 6 September [written as 6 August in error] '*1 box specimens natural history*' was shipped in his name on the barque '*Haidee*' bound for London (Anon, 1844f), presumably those he had just collected.

H.M. Whittell's unpublished material concerning Strange (now held by the Royal Australasian Ornithologists Union Library, Melbourne) notes that Strange recorded collecting a Sooty Owl *Tyto tenebricosa* on '4 Sept. 1845' and a Plumed Frogmouth *Podargus ocellatus plumiferus* on '14 Sept. 1845', on the Clarence River. As Gould described the Sooty Owl in July 1845, the dates given by Strange must be in error for 1844. The earliest steamer to leave Sydney and arrive at the Clarence in time for Strange to collect the specimens was the 'William the Fourth' which left Sydney on 28 August at 7 p.m. (Anon., 1844e). Strange apparently did not return to Sydney to receive Gilbert's box until 29 November (Anon, 1844h).

Gilbert had suggested Strange, '*unpack the box and look at the specimens*' while also removing the seeds for Mrs. Bennett. Strange obviously did this, but at the same time may have added the specimens that he collected on the Clarence River. From these Gould named the Sooty Owl, the eastern subspecies of the Little Shrike-thrush *Colluricincla megarrhyncha rufogaster* and the Plumed Frogmouth (Gould, 1845c, 1846a; Ford, 1979). These species were all described at much the same time as Gilbert's material from the Darling Downs, and in the case of the Frogmouth, in the same paper as Gilbert's hybrid Rosella, *Platycercus splendidus*.

From the notes that were taken by Whittell, and comments in Gould (1865), it is evident that Strange collected several other bird species at the Clarence River, though it is not clear whether he did this on the same visit. He also collected some rats and mice on the Clarence. In the same paper as he named the Canefield Rat, Gould named *Mus*

assimilis [= *Rattus fuscipes assimilis*, the south east Australian population of the Bush Rat] from two specimens sent by Strange from the Clarence River. In 1968 the Canefield Rat was discovered in New South Wales near Evans Head, less than 30km north of the mouth of the Clarence River (Keith, 1976). The habitat in the area, swamp forest with grassy understory, heath and eucalypt woodland is continuous between the two areas. Although it cannot be proved, it is possible that Strange also collected the specimens of the Canefield Rat and the New Holland Mouse to which Gould referred.

Also compounding this problem is the uncertain taxonomy of the Canefield Rat and its sibling species, the Pale Field-rat, *Rattus tunneyi*. The Pale Field-rat is similar in size and characters to the Canefield Rat and is still found on both the Darling Downs and the North Coast of New South Wales (Van Dyck & Longmore, 1991; Strahan, 1983). It may be that a revision of these taxa is required to resolve the problem of the identity of these specimens.

Another 'Mus' was described from material sent to Gould from the 'Darling Downs'. In 1922 Oldfield Thomas described *Notomys mordax*, the Darling Downs Hopping-mouse, from a skull in the BMNH registered in April 1846 (Thomas, 1922). This specimen had been purchased from Gould and was registered at the same time as the earliest of the BMNH specimens of *Rattus sordidus* and *Pseudomys lineolatus* purchased from Gould (Mahoney catalogue).

Notomys mordax was apparently a distinct species, but at present it remains biologically unknown (Mahoney, 1977). It has never been found again, either as subfossil material or alive, and is believed to be extinct (Strahan, 1983). Although it cannot be stated for certain, it appears that Gilbert collected this single specimen as well. The locality of collection is again unknown, although the original label says 'Darling Downs'. Given the problems with the labelling of the other mice it is just as likely to have come from the Namoi and Gwydir valleys as the Darling Downs, though it is unlikely to have come from the Clarence River as there are no *Notomys* species known from coastal southern Australia.

In 1845 Gould described the dasyurid *Podabrus macrourus* [= *Sminthopsis macroura*, the Stripe-faced Dunnart] from Gilbert's specimens from the Darling Downs. Gould later wrote that Gilbert had said that all the specimens of this species were collected in 'the Darling Downs district' (Gould, 1849). Gilbert had given

him the Aboriginal name used for the species on the Namoi. This name, 'Toon=moo=ra=la=ga', does not appear anywhere in Gilbert's diary. Gilbert either obtained this name from his 'natives of the Namoi' when he was actually on the Darling Downs, or he also collected it near the Namoi. There are three surviving specimens, BMNH 46.4.4.62 (skull only) and BMNH 87.5.4.1 (♀) (formerly LIVCM D275a), both from the Darling Downs; and the lectotype LIVCM D275 (♂) which still has its original label 'No. 10, open plains, Darling Downs' (Fisher, 1984, pers. comm.).

As noted earlier Gilbert collected a 'small *Antechinus*' near Cox's station on the Dumaresq River. Gould (1852) referred to this as a specimen of *Antechinus murinus* [= *Sminthopsis murina*, Common Dunnart]. Mr. Gilbert, who, when writing from the Darling Downs in New South Wales, ... says: 'I caught this species on the banks of the river Severn; the male is much larger in all its proportions than the female, and has a darker mark around and before the eye'. There are two specimens of this species (BMNH 53.10.22.26, BMNH 53.10.22.27), the latter has an original Gilbert label, 'No. 1. ? Severn River, New South Wales'.

Gilbert collected further specimens of this species on the Darling Downs which Gould later described as *Antechinus albipes* [= *Sminthopsis murina*, Common Dunnart] (Gould, 1852). There are two specimens surviving of this species from this locality, BMNH 53.10.22.23, which has an original Gilbert label and LIVCM 1981.35, also probably collected by Gilbert (C.T. Fisher, pers. comm.).

Gilbert's pencilled notes also record the collection of a bat species. Unfortunately he gave no details beyond a dental formula, which by itself is not sufficient to identify the species (T. Flannery & C.T. Fisher, pers. comm.).

In Gould's published works there are few references to birds collected by Gilbert on the Darling Downs. Gould received specimens of the Paradise Parrot collected by Gilbert from this area. Apart from the Liverpool paratype, there is also a specimen of a young male collected by Gilbert on 13 July 1844 in the LIVCM (Fisher, 1986).

Gould also described '*Platycercus splendidus*', now known to be a hybrid between the Pale-headed Rosella *P. eximius palliceps* and the Eastern Rosella *P. eximius eximius* (see Gould, 1846a; McAllan & Bruce, 1989; Schodde, 1989). Gould gave the type locality of *P. splendidus* as

NOTES ON BEHAVIOUR AND DIET OF *VARANUS TERIAE* SPRACKLAND, 1991. *Memoirs of the Queensland Museum* 35(1): 128. 1994:- *Varanus teriae* is 'a species with a very restricted distribution in Australia ... with a maximum geographic distribution of less than 100km ... represented by a relatively large population in a relatively restricted area ... within a national park ...' McDonald et al. (1991). It is known from only three museum specimens and four live specimens in captivity at the Beerwah Reptile Park, SEQ. *V. teriae* occurs only in the upland and lowland rainforests in the Iron and McIlwraith Ranges, of Cape York Peninsula.

In November, 1993 I observed four specimens of *V. teriae* near the Claudie R., Iron Range. (Three of these were captured for breeding studies). *V. teriae* is superbly adapted to life in the high canopy of the rainforest. It is dark (almost black), lightly built, and small; has an elongate body and long prehensile tail; and its feet bear sticky pads and long digits and claws.

The four specimens were observed at 8.00am, 11.10am, 2.05pm and 4.30pm either on the ground (three) 'raking' leaf litter or searching (?for food) in a rotting log or in a hollow tree limb (one) about 7m above the ground.

The three specimens captured passed faeces which contained insect remains. These have been identified by Dr G.B. Monteith as a tree cricket (family Gryllacrididae) from

specimen 1; a single medium sized insect, probably a cockroach (specimen 2); and a 3-4cm longicorn beetle, *Dihammus* (family Cerambycidae), and a mandible possibly from a cockroach (specimen 3). From these remains and from observations in the wild it seems reasonable to suggest that specimens of *V. teriae* forage on the ground amongst leaf litter and rotting logs and that they use their forelimbs to scratch into litter and detritus, to find insect prey.

Acknowledgements

Dr Geoff Monteith of the Queensland Museum, identified the insect remains. Jeanette Covacevich suggested we report these findings and assisted us to do so.

Literature Cited

McDonald, K.R., Covacevich, J.A., Ingram, G.J. & Couper, P.J. 1991. The status of frogs and reptiles. Pp.338-345. In Ingram, G.J. & Raven, R.J. (eds), 'An atlas of Queensland's frogs, reptiles, birds and mammals'. (Board of Trustees, Queensland Museum; Brisbane).

Stephen Irwin, *Beerwah Reptile Park, Beerwah, Queensland 4519, Australia; 26 February 1994.*

'Darling Downs, New South Wales' but later modified this to 'the newly located district to the northward of the Darling Downs' (Gould, 1847). When Gould described the bird in October 1845 he had not received any specimens from the Port Essington Expedition, but by the time he changed the locality he had received Gilbert's last collection from Leichhardt. It is likely that Gould altered his account by mistake. The hybrid zone of these taxa is, if anything, to the south of the Darling Downs. In fact hybrids are common in the Texas/Ashford area (pers. obs.) where Gilbert spent over a week while travelling north. Gilbert himself did not consider '*P. splendidus*' new, and he mentioned both the Eastern and Pale-headed Rosellas in his letter to Gould written in June (Fisher, 1985).

On the Port Essington Expedition Gilbert referred a number of times to an *Elanus* sp. which he first recorded on the Darling Downs. Chisholm (1944) suggested that Gilbert did not know the scientific name of the Letter-winged Kite and was referring to this species. Yet the name *E. scriptus* was appended by Gilbert in the Queensland Museum notebook, listed in the pencilled descriptions in the diary and used in Gilbert's letter to Gould from the Darling Downs. It may be that Gilbert saw the related, and more common species, the Black-shouldered Kite *E. axillaris*, while on the Darling Downs.

CONCLUSIONS

Gilbert's apparent inactivity in the few months spent on the Downs is in stark contrast to his earlier trips to Western Australia and Port Essington. On these trips he collected many hundreds of specimens representing numerous new species. In contrast it took him more than nine months after coming ashore at Sydney to record his first Yellow-faced Honeyeater, *Lichenostomus chrysops* (Diary for 17 October 1844). This species is still an abundant species in the forests and woodlands of eastern Australia and was a surprising oversight on Gilbert's part.

This is not to imply that Gilbert was an inadequate field naturalist, merely that he did not actively seek specimens during this period. As binoculars did not then exist, collection of a specimen was the only way he could have become familiar with the smaller birds. He certainly found time to collect specimens while travelling with the stock from Gundemaine. Yet he gave the fairly lame excuse of the weather being "unpropitious" for his lack of collections from the

Downs (letter to Bennett 10 September 1844, in Leichhardt papers ML). It may be that he was avoiding field work for other reasons, perhaps due to the tensions between Aborigines and Europeans in the area at the time, or conceivably he was filling his time helping the Coxens work their stations. The Coxens' fortunes were on the wane at this stage. Stephen Coxen committed suicide in September 1844, ostensibly over his insolvency, while Charles Coxen's property Jondaryan was sold later the same year (Anon, 1844g; French, 1990).

Roderick (1988) suggested Gilbert was limited to only one field of natural history, that of ornithology. However Gilbert's notes reveal that apart from birds, he collected reptiles, fish and shells while he remains extremely important in the history of mammalogy in Australia (Whitell, 1942a,b: 'Contents of box by Shepherd' envelope to Prince dated 2 May 1840 in NLA; letters from Gilbert to Gould written in Perth 20 May 1839 and in Port Essington dated 19 September 1840 in ML). He also took an interest in plants, possibly to help him describe the habitats in which he found particular animals. Yet he had no way to further his botanical knowledge, given the schedule he kept from 1839 onwards.

Gould's instructions for Gilbert's second visit to Australia indicate that Gilbert was to collect everything from shells, sponges and plants, to seals and 'emus from every locality' (Longman, 1922). Thus Gilbert's inability to provide beyond merely a 'small collection' should be viewed in perspective. Gould had an enormous appetite for knowledge and the glory that could be gained from discovery (Tree, 1991). After five years of collecting, perhaps Gilbert had realised that Gould, half a world away, would never be satisfied. He may have felt that he did not need to go beyond the course of duty.

Despite him feeling 'a little jealous of a foreigner being the first to make known the hidden treasures of this vast and interesting country', Gilbert's decision to join the Leichhardt Expedition may have been prompted more by a desire to redress the balance (letter to Bennett 10 September 1844 in ML). He had collected few animals in the previous nine months and indeed had found little new on the east coast, though this should not be considered lax on his part. This was an area where naturalists had been collecting specimens for over 50 years. The east coast was neither Western Australia nor Port Essington, where only a limited amount of collecting had occurred prior to his visits.

Gould had instructed Gilbert not to join any Government expedition unless he had it in writing that Gould had rights to any specimens collected and notes taken (draft of letter from Gould to Gilbert dated 14 July 1842 in NLA). In his rush to join an expedition of any sort Gilbert forgot to make such an agreement, a factor which later led to animosity with Leichhardt.

Gilbert's place in the history of Australian biology remains secure. Gilbert's Australian collections and notes, even when limited, give insights into the fauna that existed prior to the full onslaught of pastoralism and introduced herbivores. In this instance, for example, it can be seen that certain species such as the Flock Bronzewing and the Plains Rat were apparently common between the Namoi and Gwydir Rivers where they are no longer found, while the now endangered Paradise Parrot and Bridled Nail-tail Wallaby were found on the Darling Downs. The most unusual animal that may have been collected by Gilbert in this period, *Notomys mordax*, remains as enigmatic as ever.

That Gilbert apparently recorded so little of the Darling Downs fauna may be due in part to trusting his observations to memory. He did this on his second trip to Western Australia, only recording the details in his 'notebook' once he arrived in Sydney. Gilbert's death, Gould's editing of Gilbert's letters, and the mislabelling of his specimens probably guaranteed that there is little known of Gilbert's activities in these months.

ACKNOWLEDGEMENTS

This paper has taken many years to evolve and owes much to the helpful staff of the Mitchell and General Reference Libraries of the State Library of New South Wales. Of particular help in the later stages of compilation was the discerning eye of Clemency Fisher. Others who have helped in various ways include: John Calaby, Chris Chafer, Tim Flannery, Maurice French, Linda Gibson, Daniel Larkins, Ian Loch, Wayne Longmore, Marie McAllan, Allan McEvey, Graeme Phipps, Sally Reader and Tom Trnski. Thanks must also be given to the staff of the Queensland Museum Library, the John Oxley Library (Brisbane) and the National Library of Australia.

LITERATURE CITED

- ALBRECHT, G. & ALBRECHT, J. 1992. The Goulds in the Hunter Region of N.S.W. 1839-1840. *Naturae* No. 2. [Complete].
- ANON. [= Dowse, T., see Brisbane History Group, 1989] 1843. News from the Interior, Moreton Bay, Sydney Morning Herald for 17 June 1843. Vol. XV. No. 1,897: [2].
- ANON. 1844a. Shipping intelligence, Sydney Morning Herald for 31 January 1844. Vol. XVII. No. 2,094: [2].
- 1844b. Shipping intelligence, Sydney Morning Herald for 19 March 1844. Vol. XVII. No. 2,135: [2].
- 1844c. Natural history, Sydney Morning Herald for 20 April 1844. Vol. XVII. No. 2,163: [4].
- 1844d. Shipping intelligence, Sydney Morning Herald for 23 August 1844. Vol. XVIII. No. 2,270: [2].
- 1844e. Clarence River steamer [Advertisement], Sydney Morning Herald for 28 August 1844. Vol. XVIII. No. 2,274: [1].
- 1844f. Shipping intelligence, Sydney Morning Herald for 7 September 1844. Vol. XVIII. No. 2,283: [2].
- 1844g. Inquest on Mr. Coxen, Sydney Morning Herald for 7 September 1844. Vol. XVIII. No. 2,283: [3].
- 1844h. Shipping Intelligence, Sydney Morning Herald for 30 November 1844. Vol. XVIII. No. 2,355: [2].
- 1844i. List of electors for the the electoral district of Sydney, in Gipps Ward for the year 1844-5. (Kemp & Fairfax: Sydney).
1845. Sneaking, Sydney Morning Herald for 7 January 1845. Vol. XIX. No. 2,387: [2].
- AUROUSSEAU, M. (ed.). 1968. The letters of F.W. Ludwig Leichhardt. 3 Vols. Second Ser. No. CXXXV. (The Hakluyt Society, Cambridge University Press: Cambridge U.K.)
- BARKER, T. 1987. 'The Government Run. A history of Warialda 1827-1930', (Warialda Historical Society: Warialda N.S.W.)
- BREED, W.G. & HEAD, W. 1991. Conservation status of the Plains Rat *Pseudomys australis* (Rodentia: Muridae), Australian Mammalogy 14: 125-128.
- BRISBANE HISTORY GROUP. 1989. 'Brisbane Town News from the Sydney Morning Herald'. Sources No. 3. (Authors, Brisbane).
- CAMPBELL, J.F. 1931. "Squatting" on Crown Lands in New South Wales. Journal and Proceedings of the Royal Australian Historical Society 17: 43-86.
- CHAFER, C.J. 1992. Notes on the distribution of and insectivory in the Figbird *Sphecotheres viridis* in the Illawarra and Shoalhaven regions of New South Wales. Australian Bird Watcher 14: 282-285.

- CHALLINOR, H.M. 1919. Pioneer Queenslanders. Early squatters and their homes. VIII. The Coxen Family. The Daily Mail. (Brisbane), for 17 May 1919, No. 5,164: 10.
- CHISHOLM, A.H. 1940. The story of John Gilbert. *Emu* 39: 156-176.
1941. 'Strange new world, The adventures of John Gilbert and Ludwig Leichhardt'. (Angus & Robertson Ltd: Sydney). [Also 1955 Second edition; 1973 Third Edition titled 'Strange journey'.]
1944. Birds of the Gilbert Diary, part 1. *Emu* 44: 131-150.
1945. Birds of the Gilbert Diary, part 2. *Emu* 44: 183-200. [These articles were later republished as a booklet entitled 'An explorer and his birds. John Gilbert's discoveries in 1844-45'.]
- COXEN, C. 1844. Untitled [Notice of insolvency]. Sydney Morning Herald for 26 April 1844. Vol. XVII. No. 2,168: [3].
- COXEN, S. 1844. Untitled [Notice of insolvency]. Sydney Morning Herald for 26 April 1844. Vol. XVII. No. 2,168: [3].
- CRAWFORD, E. (as told to Chris Walsh). 1993. 'Over my tracks'. (Penguin Books: Ringwood, Vic.)
- DÉSCHAUENSEE, R.M. 1957. On some avian types, principally Gould's, in the collection of the Academy. Proceedings of the Academy of Natural Sciences of Philadelphia 109: 123-246.
- DEBUS, S.J.S., MCALLAN, I.A.W. & MORRIS, A.K. 1993. The Square-tailed Kite *Lophoicrinia laura* in New South Wales. *Australian Birds* 26: 104-118.
- DIVISION OF NATIONAL MAPPING. 1975. Australia. 1:250,000. Map series gazetteer. (Australian Government Publishing Service: Canberra).
1976. Texas. 1:100,000 Topographic Map.
- FISHER, C.T. 1984. Australasian mammal specimens in the collections of Merseyside County Museums. *Australian Mammalogy* 7: 205-213.
1985. Two previously unpublished letters with the correct version of a third. From John Gilbert to John Gould. *Australian Zoologist* 22(1): 5-14.
1986. A type specimen of the Paradise Parrot *Psephotus pulcherrimus* (Gould, 1845) in the Merseyside County Museums, Liverpool, England. *Australian Zoologist* 22(3): 10-12.
1992. The importance of early Victorian natural historians in the discovery and interpretation of the Australian fauna, with special reference to John Gilbert. Ph.D. Thesis, Liverpool Polytechnic/National Museums and Galleries on Merseyside.
- FORD, J. 1979. Speciation, hybridization and relationships in the Little Shrike-thrush *Colluricincla megarrhyncha* of Australia and New Guinea. *Emu* 79: 195-210.
- FOX, B.J. & BRISCOE, D.A. 1980. *Pseudomys pilligaensis*, a new species of murid rodent from the Pilliga Scrub, northern New South Wales. *Australian Mammalogy* 3: 109-126.
- FRENCH, M. 1989. 'Conflict on the Condamine, Aborigines and the European invasion'. (Darling Downs Institute Press: Toowoomba, Qld.).
1990. 'A Pastoral Romance. The tribulation and triumph of squatterdom'. (University of Southern Queensland Press: Toowoomba, Qld.).
- FRITH, H.J. 1982. Pigeons and doves of Australia. (Rigby Ltd: Adelaide).
- GALLOWAY, J.J. 1854. Map of the New England and Gwydir Districts, showing the reserves. "Transmitted to the Surveyor General with my letter of Jan. 21 1854". [Copy examined Archives Office of New South Wales.]
- GARDINER, W. 1844. Map of the districts beyond the Boundary of Location in New South Wales. Author, Armadale New England [= Armidale, Armadale was the original name for the town. Unpublished copies held in the Archives Office of New South Wales and the Mitchell Library].
- GOODWIN, K., COPELAND, J.M. & LATHAM, T. (eds). 1977. 'A history of Quirindi' (The Quirindi Centenary Celebrations Committee: Quirindi N.S.W.).
- GORMAN, H. 1852. Trace of the Connadilly or Mooki River, transmitted to the Surveyor General with my letter of 10 January 1852. [Copy examined Archives Office of New South Wales.]
- GOULD, J. 1837-1838. 'A Synopsis of the birds of Australia and adjacent islands'. (Author: London).
- 1842a. 'The birds of Australia'. Parts VI - IX. (Author: London). [These parts were published between 1 March 1842 and 1 December 1842, see Sauer, 1982; Sauer & Evans, 1987].
- 1842b. 'A monograph of the Macropodidae, or family of Kangaroos'. Part II. (Author: London).
- 1842c. "Mr. Gould exhibited a new species of *Petrogale*, ..." Proceedings of the Zoological Society of London 1842: 5-6.
- 1842d. "Mr. Gould exhibited several Australian mammals, from his own collection, which he considered new to science". Proceedings of the Zoological Society of London 1842: 10-14.
- 1842e. Description of two new species of Kangaroos from Western Australia. *Annals and Magazine of Natural History* 10: 1-3.
- 1842f. "Mr Gould then brought before the notice of the Meeting some additional ornithological

- novelties from Australia". Proceedings of the Zoological Society of London 1842: 17-21.
- 1842g. "Mr. Gould then proceeded to characterize a new species of *Perameles* from Port Essington, ...". Proceedings of the Zoological Society of London 1842: 41-42.
- 1842h. "Mr. Gould exhibited and pointed out the characters of two new species of Kangaroo". Proceedings of the Zoological Society of London 1842: 57-58.
- 1842i. "Mr Gould exhibited to the meeting an extensive collection of Australian *Halcyonidae*. ...". Proceedings of the Zoological Society of London 1842: 72.
- 1843a. "Mr. Gould exhibited and characterized the following thirty new species of Australian birds". Proceedings of the Zoological Society of London 1842: 131-140.
- 1843b. 'The Birds of Australia'. Parts X - XI. (Author: London).
- 1845a. On a new species of *Platyercus*. Annals and Magazine of Natural History 15: 114-115.
- 1845b. "Mr. Gould exhibited to the Meeting five new species of Mammals". Proceedings of the Zoological Society of London 1845: 77-79.
- 1845c. "Mr. Gould exhibited to the Meeting three new species of Birds from Australia". Proceedings of the Zoological Society of London 1845: 80.
- 1846a. "Mr. Gould then exhibited two new birds from New South Wales". Proceedings of the Zoological Society of London 1845: 104-105.
- 1846b. "Mr. Gould then exhibited to the meeting two new Australian birds, which he characterized as follows". Proceedings of the Zoological Society of London 1846: 83-84.
1847. 'The Birds of Australia'. Part XXVII. (Author: London).
1849. 'The Mammals of Australia'. Part II. (Author: London).
1852. 'The Mammals of Australia'. Part IV. (Author: London).
1853. 'The Mammals of Australia'. Part V. (Author: London).
1855. 'The Mammals of Australia'. Part VII. (Author: London).
1856. 'The Mammals of Australia'. Part VIII. (Author: London).
1857. 'The Mammals of Australia'. Part IX. (Author: London).
- 1858a. On four new species of *Mus* and one of *Hapalotis* from Australia. Proceedings of the Zoological Society of London 1857: 241-143.
- 1858b. 'The Mammals of Australia'. Part X. (Author: London).
1863. 'The Mammals of Australia'. Part XIII. Introduction (esp. p. xxxvi). (Author: London).
1865. 'Handbook to the Birds of Australia'. (Author: London).
- GRAY, J.E. 1842a. A new species of Tapering-tailed *Phascogale* in the collection of the British Museum. Annals and Magazine of Natural History 9: 518.
- 1842b. Descriptions of some new genera and fifty unrecorded species of Mammalia. Annals and Magazine of Natural History 10: 255-267.
- GÜNTHER, A. 1859. 'Catalogue of the fishes in the British Museum'. Vol. 1. (Trustees of the British Museum: London).
- HAMILTON, R.L. 1960. Allan Cunningham - with special reference to his work in what is now Queensland. Journal and Proceedings of the Royal Australian Historical Society 46: 323-342.
- HINDWOOD, K.A. 1938. Mrs. John Gould. Emu 38: 131-138. [Includes excerpts from Elizabeth Gould's diary notes held in ML dated 21 August - 30 September 1839].
- HUNT, G.L. 1980. 'When Narrabri was young. A story of Narrabri from 1818 to 1900'. (Narrabri Municipal Council: Narrabri, N.S.W.).
- JERVIS, J. 1962. Exploration and settlement of the north-western Plains [Part 1]. Journal and Proceedings of the Royal Australian Historical Society 48: 377-394.
1963. Exploration and settlement of the North-western Plains [Part 2]. Journal and Proceedings of the Royal Australian Historical Society 48: 436-457.
- JUKES, J.B. (ed. by "his sister"). 1871. 'Letters and extracts from the addresses and occasional writings of J. Becte Jukes, M.A., F.R.S., F.G.S., late local Director of the Geological Survey of Ireland, etc. etc. etc.' (Chapman & Hall: London).
- KEITH, K. 1976. The occurrence of the Dusky Field-rat, *Rattus sordidus* (Rodentia: Muridae), in New South Wales. Australian Wildlife Research 3: 149-151.
- LEICHHARDT, L. 1847. 'Journal of an overland expedition in Australia, from Moreton Bay to Port Essington, a distance of upwards of 3000 miles, during the years 1844-1845'. (T. & W. Boone: London).
- LOCH, I. 1989. A Strange tale. Australian Natural History 23: 194-195.
- LONGMAN, H.A. 1922. John Gould's notes for John Gilbert. Memoirs of the Queensland Museum 7: 291-294.
- LONGMUIR, J. (ed.). 1956. 'Gunnedah Centenary 1856-1956'. (Gunnedah Centenary Committee: Gunnedah N.S.W.).

- MCALLAN, I.A.W. 1987. Early records of the Thick-billed Grasswren *Amytornis textilis* and Striated Grasswren *Amytornis striatus* from New South Wales. *Australian Birds* 21: 33-43.
- MCALLAN, I.A.W. & BRUCE, M.D. 1988 [=1989]. 'The birds of New South Wales. A working list'. (Biocon Research Group: Turrumurra N.S.W.)
- MCEVEY, A. 1979. Appendices to 'The Birds of Australia and Adjacent Islands'. Facsimile Edition. (Lansdowne Editions: Melbourne).
- MCLEAN, [A.]. 1847. Plan shewing the Squatting Districts of Gwyder & Liverpool Plains with parts of New England, Darling Downs, Bligh, Wellington & Lower Darling. (presumably published New South Wales Surveyor General: Sydney). [Copy examined Archives Office of New South Wales.]
- MACGILLIVRAY, J. 1846. An account of Raine's Islet, on the N.E. coast of New Holland. *The Zoologist* 46: 1473-1481.
- MAHONEY, J.A. 1977. Skull characters and relationships of *Notomys mordax* Thomas (Rodentia: Muridae), a poorly known Queensland Hopping-mouse. *Australian Journal of Zoology* 25: 749-754.
- MAHONEY, J.A. & POSAMENTIER, H. 1975. The occurrence of the native rodent *Pseudomys gracilicaudatus* (Gould 1845) (Rodentia: Muridae) in New South Wales. *Australian Mammalogy* 1: 333-346.
- MORRIS, A.K., MCGILL, A.R. & HOLMES, G. 1981. 'Handlist of the birds of New South Wales'. (New South Wales Field Ornithologists Club: Sydney).
- RICHARDSON, J. 1842a. Contributions to the Ichthyology of Australia. Part I. *Annals and Magazine of Natural History* 9: 15-31.
- 1842b. Contributions to the Ichthyology of Australia. Part II. *Annals and Magazine of Natural History* 9: 120-131.
- 1842c. Contributions to the Ichthyology of Australia. Part IV. *Annals and Magazine of Natural History* 9: 384-393.
- 1842d. Contributions to the Ichthyology of Australia. Part V. *Annals and Magazine of Natural History* 10: 25-34.
- RODERICK, C. 1988. 'Leichhardt the dauntless explorer'. (Angus & Robertson: Sydney).
- ROYAL AUSTRALIAN SURVEY CORPS.
1969. Curlewis. 1:100,000 Topographic Map.
1970. Murrurundi. 1:100,000 Topographic Map.
1982. Bellata. 1:100,000 Topographic Map.
1987. Moree. 1: 250,000 Topographic Map.
1988. Narrabri. 1:250,000 Topographic Map.
- RUSSELL, H.S. 1888. 'The genesis of Queensland' (Turner & Henderson: Sydney).
- SAUER, G.C. 1980. 'John Gould's prospectuses and lists of subscribers to his works on natural history; with an 1866 facsimile'. (Author: United States of America).
1982. 'John Gould, the Bird Man. A chronology and bibliography'. (Lansdowne Editions: Melbourne).
- SAUER, G.C. & EVANS, D. 1989. John Gould's *Birds of Australia* in the original 36 Parts, with notes on the cancelled plates and text. *Bulletin of the Bibliographical Society of Australia and New Zealand* 11: 67-69.
- SCHODDE, R. 1988 [=1989]. New subspecies of Australian birds. *Canberra Bird Notes* 13: 119-122.
- STONE, W. & MATHEWS, G.M. 1913. A list of the species of Australian birds described by John Gould, with the location of the type-specimens. *Austral Avian Record* 1: 129-180.
- STRAHAN, R. 1979. 'Rare and curious specimens. An illustrated history of the Australian Museum 1827-1979'. (The Australian Museum: Sydney).
- (ed.). 1983. *The Australian Museum Complete Book of Australian Mammals*. (Angus & Robertson: Sydney).
- THOMAS, O. 1921. Notes on Australasian rats, with a selection of lectotypes of Australasian Muridae. *Annals and Magazine of Natural History, Series 9*, 8: 425-433.
1922. Two new Jerboa-rats (*Notomys*). *Annals and Magazine of Natural History, Series 9*, 9: 315-317.
- TORRENS, H.S. 1987. John Gilbert (1812-1845) the Australian naturalist and explorer. New light on his work in England. *Archives of Natural History* 14: 211-219.
- TREE, J. 1991. 'The ruling passion of John Gould. A biography of the bird man'. (Barrie & Jenkins: London).
- VAN DYCK, S.M. & LONGMORE, N.W. 1991. 1.4 The mammal records. Pp. 284-336. In Ingram, G.J. & Raven, R.J. (eds.), 'An Atlas of Queensland's frogs, reptiles, birds & mammals' (Queensland Museum: Brisbane).
- WARREN, R.L.M. 1966. 'Type-specimens of birds in the British Museum (Natural History). Vol. 1. Non-Passerines'. (British Museum Natural History: London).
- WARREN, R.L.M. & HARRISON, C.J.O. 1971. 'Type-specimens of birds in the British Museum (Natural History). Vol. 2. Passerines'. (British Museum Natural History: London).
- WATERHOUSE, F.H. 1885. 'The dates of publication